Cizer Quick Query & Query Builder
Version 4.5

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Chapter 1: Accessing & Running Reports From The Home Page & Report Library

THIS CHAPTER WILL COVER:

- Logging In And Updating Your Password
- A Walk-Through Of The Home Page
- Running And Viewing Reports From The Favorites List
- Locating And Running Reports From The Report Library
- Exporting Reports To Different Formats For Viewing, Printing And Saving
- Managing Your Favorites List
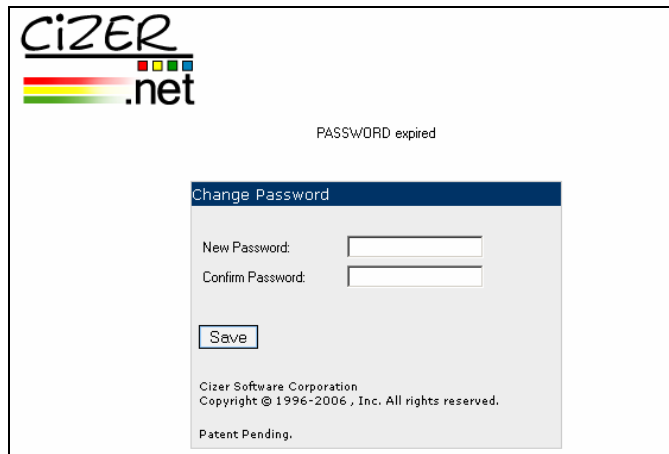
LOGGING IN

1. Double Click the CNR icon on your desktop. You will see the following log in screen.
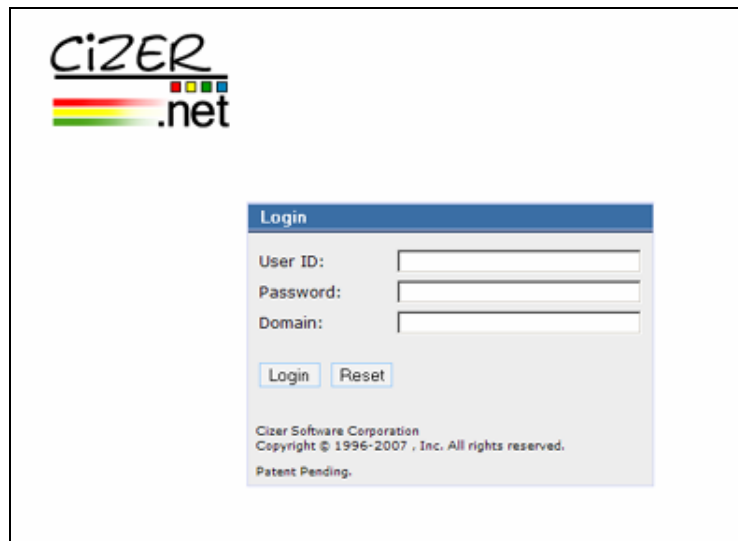
2. Your company's Cizer.Net Reporting Administrator will provide you with your permanent User ID and Password, but for the purposes of this training class, please enter your information based on the example given below. Enter this login information and click the Login Button.

- User ID: **Admin** (this field is not case sensitive)
- Password: **admin** (this field is case sensitive)
- Domain: _____ (this field will not be needed for class)

UPDATING YOUR PASSWORD

The first time you log in, you will be prompted to update the password.

3. Enter the password you want to use, remembering it is case-sensitive.

4. Re-enter the password exactly, including the case.

5. Click the Save button.

6. Please make a note of your password to use for the rest of the class.

Once you login, you will see the Cizer.Net Home Page (Cizer Portal Interface).
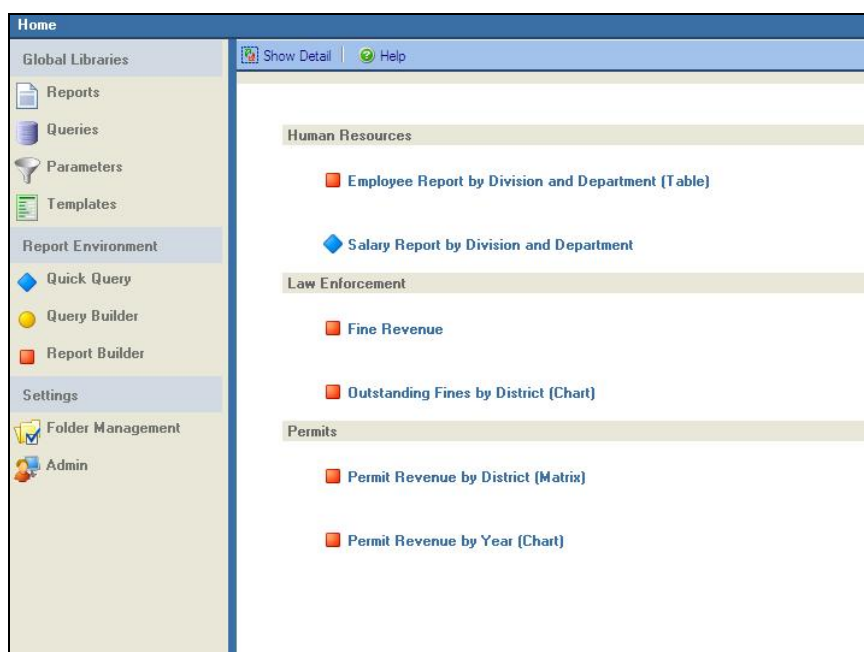
The Portal page allows quick access to favorite reports, global libraries and report building tools. Administration and folder management may also be accessed from the portal screen if the user has been given these rights.

WHAT IS THE FAVORITES LIST?

Your most frequently viewed reports may be marked as **Favorite Reports** for convenient access. This list is personalized for each individual user of CNR, and it is simple to add or remove reports from this list using a tool in the Report Library. Clicking the **Show Detail** tool button at the top of the Favorites list will display any description that has been added to the report definition stored in the Report Library.
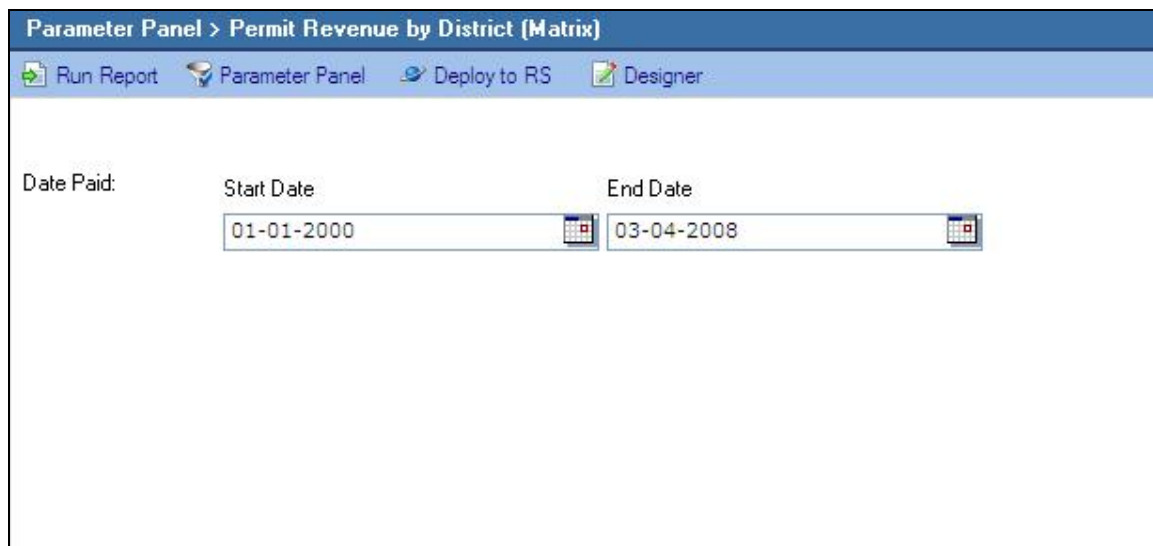
Each Favorite Report is preceded by the icon of the CNR tool used to create the report, e.g., the reports built with Report Builder are preceded by a red square to match the Report Environment icon for Report Builder in the left navigation pane. Similarly, reports built using Quick Query are preceded by a blue diamond. Should you have reports on your Favorites list that were built in an external tool such as Microsoft Visual Studio, those reports will be preceded by a green triangle.
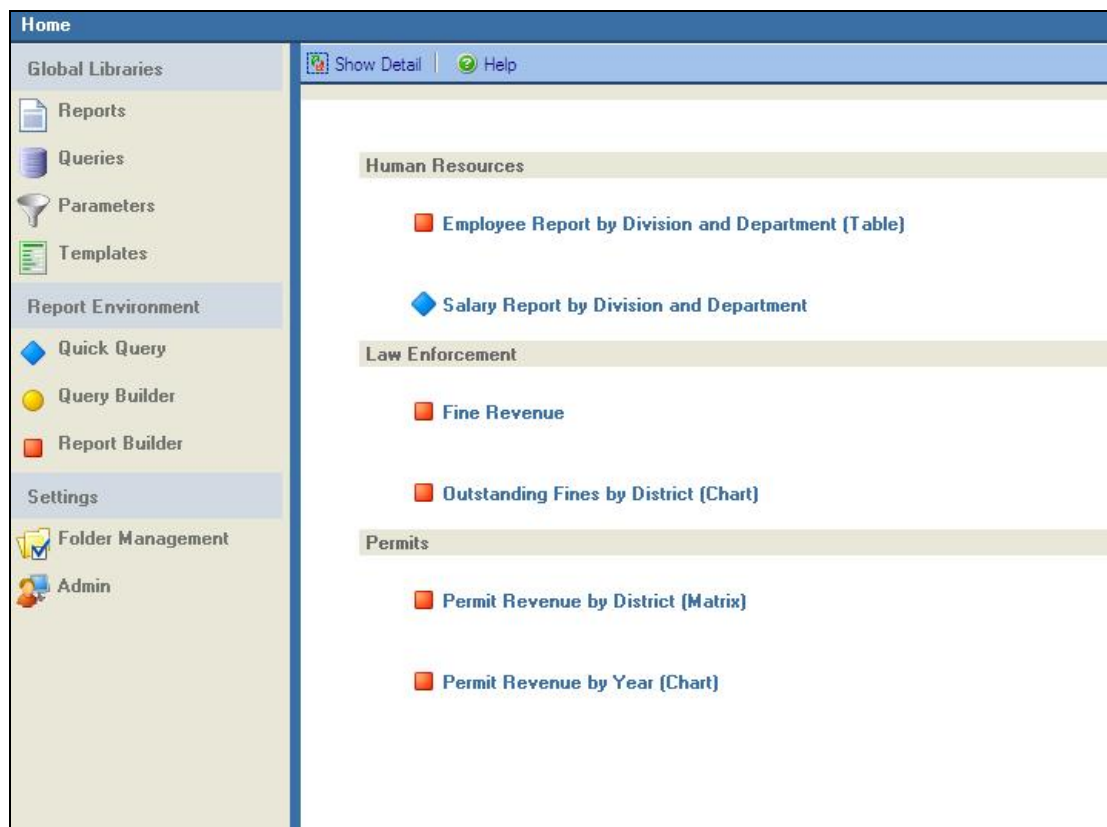
RUNNING REPORTS FROM THE FAVORITES LIST

Running Reports with Parameters

1. Choose Permit Revenue by District (Matrix) from the Favorites list.

2. The Parameter Panel will appear.

Parameters are used singly or in combination to present ad-hoc data selection to the user. This is an easy and quick way to ensure you have the right data in your report every time you run a report.

There are several different types of parameters, depending on the type of data being filtered. Work from top to bottom and enter the values you want.

Run Report: Runs the report.

Parameter Panel: Restores the Parameter Panel to the default selections.

3. Click Run Report to run the selected report and view it on-screen.

Permit Revenue by District (Matrix)

Run Report   Parameter Panel   Deploy to RS   Designer

|◄ ◄ | 1 | of 1 | ► | ►| | 100% ▼ | | Find | Next | Select a format ▼ | Export

Permit Revenue by District

From: 01-01-2005 to 03-04-2008

		2005		2006		2007	
		Count	Amount	Count	Amount	Count	Amount
⊞ N/A	District Total	2	$583.00	97	$32,684.00	111	$34,989.00
⊞ First	District Total	19	$665.00	34	$1,190.00	6	$12,214.00
⊞ Second	District Total	12	$420.00	28	$980.00	0	
⊞ Third	District Total	12	$420.00	33	$1,155.00	1	$35.00
⊞ Fourth	District Total	13	$455.00	45	$1,575.00	0	
⊞ Fifth	District Total	21	$735.00	21	$735.00	0	

Here the icons will have slightly different functions:

Run Report: Refreshes the data in the report.

Parameter Panel: Returns to the Parameter Panel where you can select different parameters. If there are no parameters in the report, selecting this icon causes the report to refresh.

Deploy to RS: Deploy your report to Microsoft Reporting Services. The report is saved on the Reporting Services server under a folder pre-defined by your Cizer.Net administrator.

Designer: Return to the Report Designer.

Expanding Reports with Drilldown

Only reports set to be Drilldown at the time they are created will display the expansion capability when run in the viewer. Once it is created as a Drilldown report, however, it will retain the drilldown capability when it is exported to Excel or PDF.

The Report is defaulted to collapse the drilldown options when the report is run. Click on the **+** to expand the data to view the report at the detail level rather than the summary level. A table report or a Matrix report can be designed with Drilldown capability.

Permit Revenue by District (Matrix)

Run Report 🔍 Parameter Panel ⚙ Deploy to RS ✏ Designer

◁◁ ◁ 1 of 1 ▷ ▷▷ 100% ▾ [   ] Find | Next Select a format ▾ Export ↻ 🖨

Permit Revenue by District

From: 01-01-2005 to 03-04-2008

			2005		2006		2007	
			Count	Amount	Count	Amount	Count	Amount
⊞ N/A	District Total		2	$583.00	97	$32,684.00	111	$34,989.00
⊟ First		Backflow	18	$630.00	30	$1,050.00	0	
		Backflowcommercial	1	$35.00	4	$140.00	0	
	⊟ Permit	Building Commercial	0		0		6	$12,214.00
		District Total	19	$665.00	34	$1,190.00	6	$12,214.00
⊟ Second	⊞ Permit		12	$420.00	28	$980.00	0	
		District Total	12	$420.00	28	$980.00	0	
⊞ Third	District Total		12	$420.00	33	$1,155.00	1	$35.00
⊞ Fourth	District Total		13	$455.00	45	$1,575.00	0	
⊞ Fifth	District Total		21	$735.00	21	$735.00	0	

Printing Report from the Reporting Services Viewer

🖨 Print the report by clicking the printer icon on the Reporting Services Viewer toolbar (next to the data refresh button). This will take you to your default printer dialog box for your normal Windows printing choices. If this is the first time you've printed, you will be asked to authorize the installation of an ActiveX control delivered by Reporting Services before you can print. Once that's on the machine from which the browser is being used, it will not appear with subsequent print requests.

Print ✕

Printer

Name: HP LaserJet 4000 Series PCL ▾ [Properties...]

Status: Ready
Type: HP LaserJet 4000 Series PCL
Where:
Comment: ☐ Print to file

Print range
◉ All
○ Pages   from: [   ]   to: [   ]

Copies
Number of copies: [1] ⬍
☑ Collate

[Preview...]   [OK]   [Cancel]

Exporting Reports to Excel

After a report is run and is visible in the Reporting Services viewer, you may export the contents of the report to various file formats such as Excel and PDF.

1. Export to Excel by clicking the dropdown arrow on the Select a Format box and click on Excel.

2. Once Excel has been selected, click on the Export link to start the export process. The report will run again, but this time it will display on the screen after bringing up the Excel program on your client machine. **Note:** Excel must be loaded on your client machine to actually Open or Save the report in Excel using the Export feature.
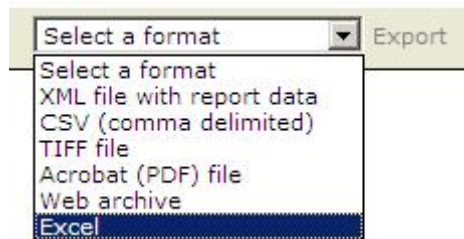
3. If your network permissions require it, the dialog box asking you to Open or Save the file in Excel (.xls) format will display, and you must choose to either Open the report or Save it to a folder.

4. When the file opens, it will be running in Excel as a normal Excel workbook, displaying a copy of the data, to which you can apply any Excel functionality. For example, you can edit the numbers in the Excel worksheet, using it for 'what if' analysis without affecting the numbers in the actual database from which the report was run. You can also Save or Print the .xls worksheet as you would do with any Excel file, retaining the drill-down feature which you previously used in the Reporting Services viewer.

Permit Revenue by District
From: 01-01-2005 to 03-04-2008

		2005		2006		2007
---	---	Count	Amount	Count	Amount	Count	Amount
N/A	District Total	2	$583.00	97	$32,684.00	111	$34,989.00
First	District Total	19	$665.00	34	$1,190.00	6	$12,214.00
Second	District Total	12	$420.00	28	$980.00	0	
Third	District Total	12	$420.00	33	$1,155.00	1	$35.00
Fourth	District Total	13	$455.00	45	$1,575.00	0	
Fifth	District Total	21	$735.00	21	$735.00	0	

5. Print and save the Excel file as you would any .xls file.

6. When you close Excel, you will be returned to the Reporting Services viewer screen from which you started with the Export process. You may then continue with another Export process or use the top-level links to return to the CNR Home Page and continue working.

WHAT IS THE REPORT LIBRARY?

The Report Library, one of the Global Libraries in CNR, holds all pre-written reports. To open the library, simply click on the Reports link from the portal screen and you will see the Report Library interface.

Using the Report Library

1. On the CNR Home Page, click on **Reports** under the **Global Libraries** Section

The library interface has a simple design. A Folder Tree on the left side of the screen contains objects specific to that library. The Folders are expanded individually by clicking on the plus sign next to the folder, and opened by clicking on the folder name. **Expand Tree** and **Collapse Tree** magnifying glass icons are available above the tree as a short cut to expand or close all folders at the same time.

Each user gets a personal folder named after his/her login id. Also, the user can see any folder to which he/she has been granted access.

2. Click on the Law Enforcement Folder and a list of available reports will appear.
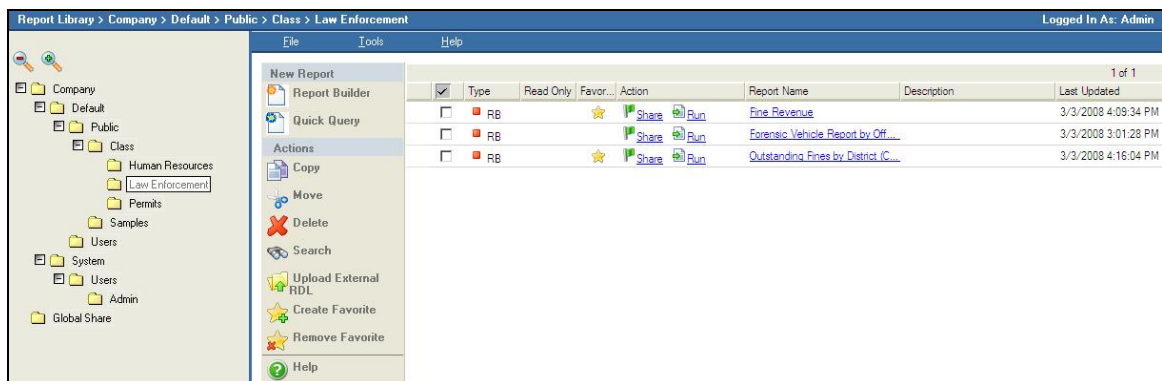
The list of reports within each specific folder will be displayed on the right, and may be re-sorted by clicking on the column name desired (Type, Report Name, Last Updated, etc).

> Clicking the checkbox icon above the column of check boxes will toggle between selecting all reports on a page and deselecting all reports on a page. For better viewing, the columns may re-sized by selecting any line separating two columns and dragging it to adjust the column width as needed.

The table below provides a description of each toolset item:

	Report Builder:	Click this icon to begin building a new report in Report Builder. You will have the choice of using a wizard or entering directly into the Report Builder designer interface.
	Quick Query:	Click this icon to begin building a report with Quick Query.
	Copy:	Copy a Report (copy a report to your personal folder).
	Move:	Move a Report to another folder.
	Delete:	Delete a Report.
	Search:	When clicked, search criteria text boxes display above the Report list. Enter a "Report Name", "Description", "Report Type" and/or "Update Date". For each entry, excluding Update Date, select the "Starts With", "Contains" or "Exact Match" radio button.
	Upload External RDL:	Upload an RDL file from a location on your network or machine. This allows users to build reports using other tools, such as VS.Net, but manage them in the Cizer.Net Report Library. However, external reports can not be edited in CRB.
	Create Favorite:	Select the checkbox beside one or more Reports, and then select Create Favorite to add the selected report(s) to your personal Favorites List in the Portal Page.
	Remove Favorite:	Remove a report from your personal Favorites List.
(Tools)	**Export Report:**	Export reports from one CNR database to another.
(File)	**New:**	A quick link with options to create a new Quick Query or Report Builder report.
(Tools)	**Import Report:**	Import reports from one CNR database to another.
	Help:	Access on-line Help.
(Help)	**About Cizer.Net Reporting:**	Lists the version, copyright and Technical Support information.

Below is a list of the icons associated with individual reports, and a description of each.

| Report Icons		
⇥	**Run Report:**	Run the report.
⚑	**Share:**	Share the report with other users, granting read and/or write access.
■	**Red Squares:**	Indicates that this Report was created in Cizer Report Builder.
◆	**Blue Diamonds:**	Indicates that this Report was created in Cizer Quick Query.
▲	**Green Triangles:**	Indicates that this Report was built in an external tool.
📘	**Read Only:**	Indicates a report that can be viewed but not edited.
★	**Favorites:**	Shows that this Report is in your Favorites list.

Adding a Report to Favorites on the Home Page

To add a Report to the Favorites List, make sure your user folder is selected. The folder name is the same as your login name. Once you have selected your folder, a list of all the reports saved in your personal folder will display in the Report Library.
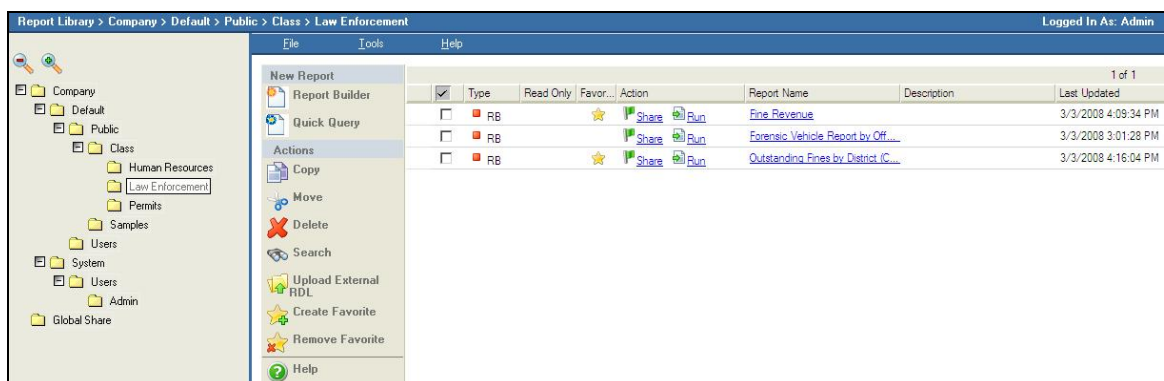
2. Check the box next to the report you would like added as a Favorite.

3. Click the **Create Favorite** button on the left.

4. The Report will now appear on your personal Favorites list on the Home Page.

4. Click the Home Page button at the bottom of the screen to return to the Home Page and check to see if the Report is now listed on your personal Favorites list.
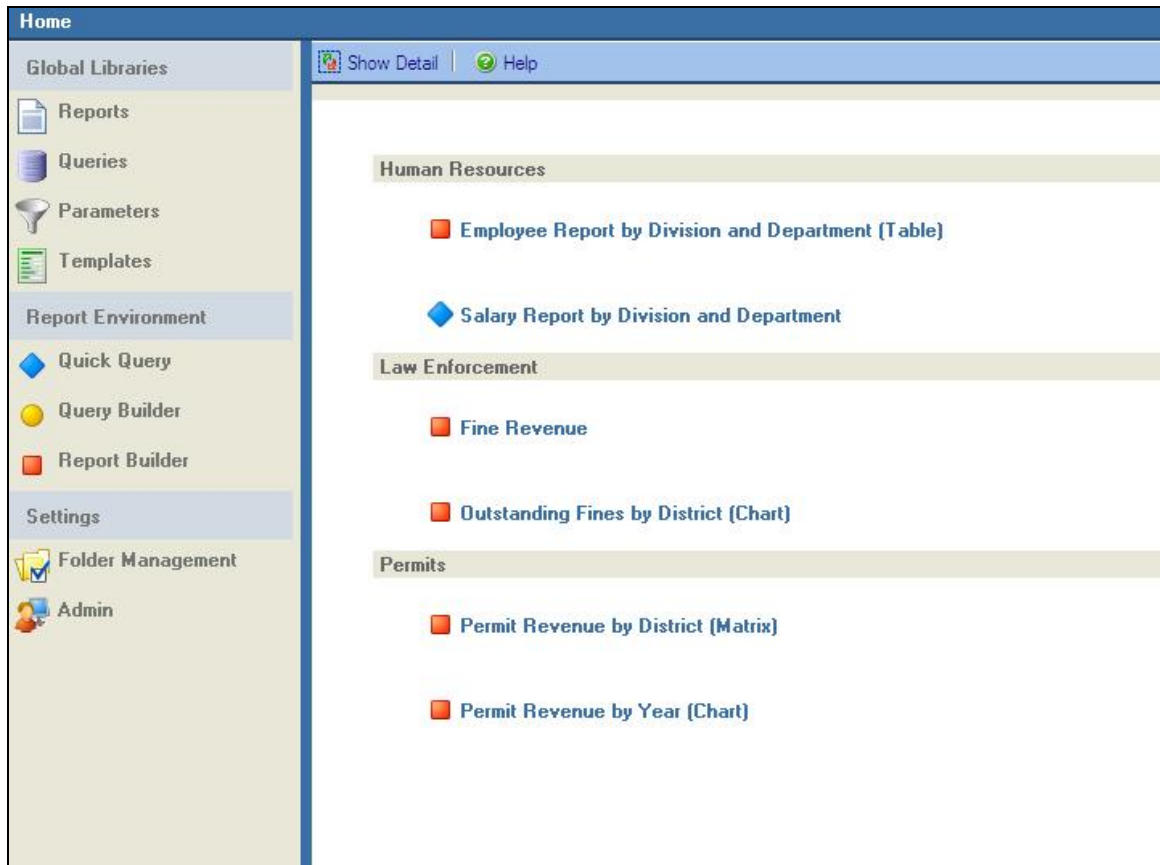
Clicking the Show/Hide Detail tool button at the top of the Favorites List section will toggle the description of the report between being either visible or invisible.

Removing Reports from Favorites List

Return to the Report Library to remove reports form the Favorite list.

5. Check the boxes of the report(s) that you wish to remove from the favorites list.

6. Click the **Remove Favorite** button on the left.

Chapter 2: Ad-Hoc Reporting With Cizer Quick Query

THIS CHAPTER WILL COVER:

- ❖ Logging In as a Different User to see Differences Through Permissions
- ❖ Getting Familiar with the Quick Query Interface
- ❖ Building a Report in Quick Query
- ❖ Filtering Data in a Quick Query Report
- ❖ Formatting a Quick Query Report
- ❖ Building a Summary Report in Quick Query
- ❖ Exporting to Other Formats and Printing a Quick Query Report

WHAT IS CIZER QUICK QUERY?

Cizer Quick Query (CQQ) is an ad-hoc reporting tool that empowers even non-technical users to create customized reports on an as-needed basis. Quick Query allows the user to connect to a Table, View, Stored Procedure, or User Query that exists through a data source connection that's already been established and enabled for that user. Once a user has located the specific data items required to create their report, they simply use the point & click capability of Quick Query to put together the report they need. They can also filter the data brought into each field by selecting from a clickable drop-down list.
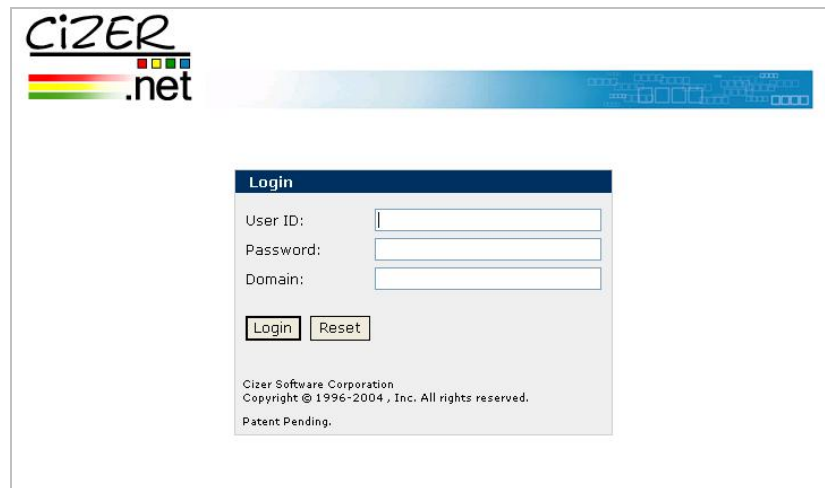
After a user has chosen each of the fields and filters they wish to use in a report, they also have the ability to do some additional minor formatting of the report if they wish. Through formatting, the user can select custom colors for the banded report, as well as format any Groups that may be in the report. The user also has the ability to add formatting to currency, numbers and dates. Cizer Quick Query is the perfect analytic tool for any user.

A report can literally be configured, formatted and run in as little as 60 seconds using Quick Query's point-and-click browser-based interface and the power of Microsoft SQL Server Reporting Services.

In today's fast-paced business world, information is needed by business users in all areas of an organization. The data can no longer be the exclusive responsibility of the analyst or IT technical professional. Business users across the enterprise need different reports, for different reasons, at different times. Now everyone can create and run simple reports whenever they need them using Cizer Quick Query.

LOGGING IN

In this section, we're going to log in under a different User ID for which different permissions have been set. This will allow us to see a different set of information on the screen. On our previous section, we were working with a User ID that gave us Admin rights, so we were able to see all parts of the program. Now we're going to use an ID that will allow us to use only the Quick Query module. When you've successfully logged in, note how the Home Page now displays less information and tool buttons. This Login ID and password are only for class purposes and are not intended as a model for User IDs within a company. Your company Cizer administrator will provide you with an appropriate Login ID and Password based on the company's requirements.

Fill in the User ID and password as shown below:

- User ID: **PatCQQ** (this field is not case sensitive)
- Password: **patcqq** (this field is case sensitive; note they're all lower case)
- Domain: _____ (this field will not be needed for class)

Once you login, you will see the Cizer.Net Home Page (Cizer Portal Interface). Notice that on the left-hand side, you'll see links that will take you directly to the Quick Query and Query Builder modules in the program. You'll remember from the CNR Basics section that you can also use the Favorites list to access and run reports. The blue diamonds in front of a Favorite report indicate that it was created and saved in Quick Query, which is what we'll be using in this class session.

A red square indicates a more complex Report Builder report, and a green triangle indicates an external report that has been created in another tool such as Visual Studio and uploaded into the CNR Portal interface for running.

Open the Report Library. From the Human Resources folder, select the "Salary Report by Division and Department" Quick Query report. By clicking on the name of the Report, the Quick Query module will display. (Note: If the Quick Query report selected has parameters attached, you will see the "Select Parameters" tab, otherwise you will see the "Select Columns" tab.)   At this point, you can run the report by clicking the Run icon, or you can change the specific selections that define the report before you run it to return a different set of data.

If you change the selections in this report and hit the Save icon, a new copy of the report will be saved to your user folder.

The example below shows the "Select Columns" tab of the "Salary Report by Division and Department" Report.
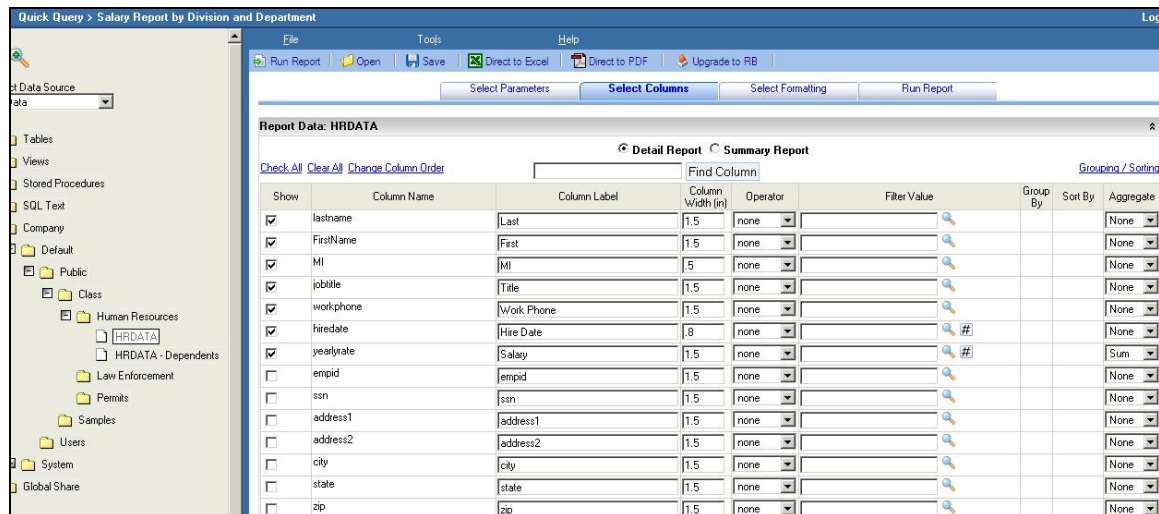
QUICK QUERY SCREEN ELEMENTS

When building a report, you will select the Data Objects needed for your report from the tree of folders in the left panel of the Cizer Quick Query interface. Users are granted rights to specific Data Objects and Quick Query features through the Administration Configuration. If you need access to something other than the items shown in your list of Data Objects, consult with your organization's Cizer.Net Reporting administrator for assistance.

The folder tree on the left contains data objects only, not reports. If you click into a different object while building a report, you will begin building a completely new report from that data object and any changes made to your original report will be lost. To return to a saved Quick Query report, you will need to reselect that report from the Report Library.

Tree Toolbar:

Collapse Tree: Use this icon to close all open folders in the tree below with a single click.

Expand Tree: Use this icon to open all closed folders in the tree below with a single click.

Data Objects:

Data Sources

Choose from any defined Data Source that you have access to from this drop-down list. If you want to access a database that is not shown in this list, contact your Cizer.Net Reporting administrator for more information.

Tables

This section of the tree shows all the tables for the particular Data Source you selected from the drop-down menu above. To build a report against any table, click on the table name and move to the Work Area on the right of the screen to start building. If you would like to build a report against more than one table at a time, contact your Cizer.Net Reporting administrator to request a customized view.

Views

This section of the tree shows all the defined views for the particular Data Source you selected from the drop-down menu above. To build a report against any view, click on the View name and move to the Work Area on the right of the screen to start building.

Stored Procedures*

Using a Stored Procedure will provide you with an optimized data set that you can use to build your report. You will need to clearly know your data in order to define the string values requested by the interface to work with these Stored Procedures.

SQL Text*

If you are proficient with SQL and you know the structure of the data you are working with, you can use this option to define a given dataset and subsequently write a query or report from that returned data. This option is geared towards the more technical user, and is intended to provide flexibility in reporting and end user independence.

* These two Data Objects (**Stored Procedures** and **SQL Text**) are designed to increase flexibility for the more technical end user. You will be able to build most of the reports you need using Tables, Views and Queries. If you need extra options in your reporting, contact your Cizer.Net Reporting administrator for assistance.

User, Public and Shared Items Folders

User and Public folders are within your organization's folder which is contained in the Company folder. Previously built queries without parameters are organized in and accessible from these data source folders. Queries built by you are stored in your personal folder. The **Public** folder contains sample queries by default, although queries can be moved into or out of the **Public** folder. The **Shared Items** folder will contain any queries owned by others, but shared out to you. The Administrator view is slightly different, with the **Public** folder being the same, but only one other folder, named **Users**, with all users' personal folders contained within. In administrator view, the Shared Items folder is also replaced by a Global Share folder.

| Toolset Items		
(File)	**New:**	Create a new Quick Query report.
(File)	**Open:**	After selecting this icon, a new window opens the report library. Click on the folder where the desired report is stored; in the right panel, select the desired report. Click the "Open" button. Only reports that are saved as Quick Query reports can be reopened in Quick Query.
(File)	**Save:**	Save your report in the Cizer.Net Report Library. From the Report Library, your report can be made available to others, upgraded to Report Builder or made a "Favorite" for easy access from the Cizer.Net Portal page. Note: Using commas in report names creates publishing errors within Reporting Services. Avoid using commas in report names.
(File)	**Save As:**	Save a copy of the Query from the existing Query.
(File)	**Properties:**	View and edit the report name and description.
(Tools)	**Test SQL:**	Use this icon to see the SQL generated behind the scenes by Quick Query.
(Tools)	**Send to Hard-Drive:**	Save your report (the query and design that makes up your report, not the actual data returned by the query) in the XML based Report Definition Language to be uploaded at a later date or shared with co-workers. This file will be saved with an extension of .rdl.
(Tools)	**Open from Hard-Drive:**	Use this icon to upload saved .rdl files into your Quick Query environment. You can then run the uploaded report as it is, or you can make changes before running the report. Note that you must have permissions to the data source and objects that the report is built on to be able to run the report.
(Tools)	**Deploy to Reporting**	Deploy your report to Microsoft Reporting Services. The report is saved on the Reporting Services server under a

	Services:	folder pre-defined by your Quick Query administrator. The report can then be run and emailed to others, with various rendering format options, on a schedule definable within Reporting Services.
(Tools)	**Direct to Excel:**	Export your report directly to Excel.
(Tools)	**Direct to PDF:**	Export your report directly to PDF.
(Help)	**Cizer.Net Reporting Help:**	Opens the on-line help window.
(Help)	**About Cizer.Net Reporting:**	Lists the version, copyright and Technical Support information.
	Run Report:	Once you have selected the appropriate fields and set the correct Report Options, use this icon to run the report. After the report is displayed on the screen, you can continue to make changes and run the report again.
	Upgrade to RB:	Upgrade a saved Quick Query report to allow editing in Report Builder. This icon appears only when viewing a *saved* Quick Query report.

Parameter Tab

When selecting a query or a report with parameters attached, the working area opens with the Select Parameters tab visible, to the left of the Select Column, Select Formatting and Run Report tabs. Select the desired data criteria from the available parameters before continuing on to the other tabs, or running the report. We will learn later in the course how to add parameters to queries when we cover Queries and Parameters.
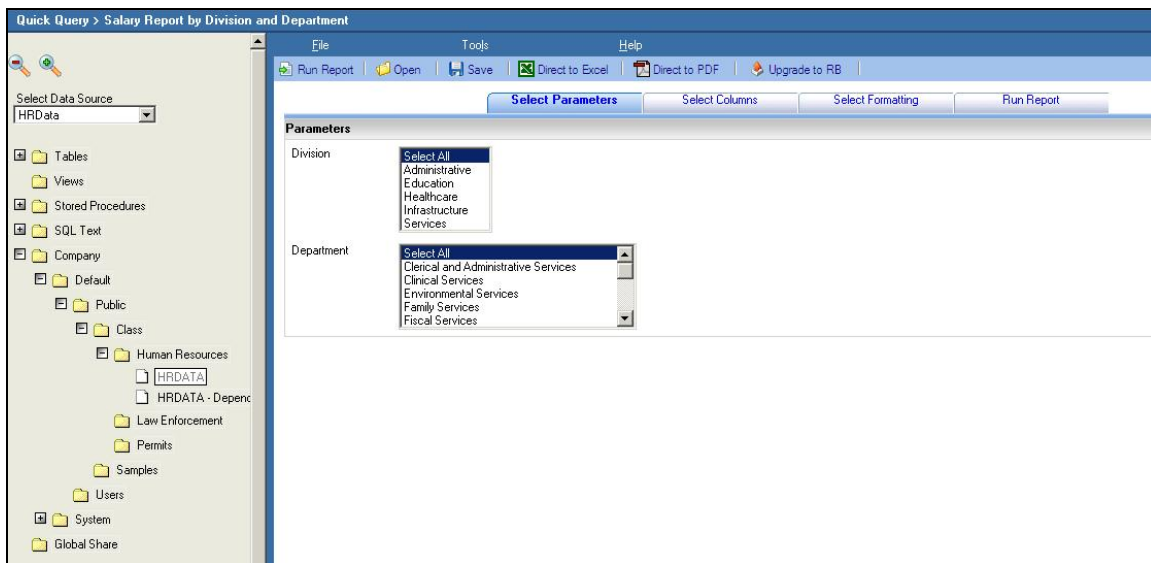
Select Columns Tab
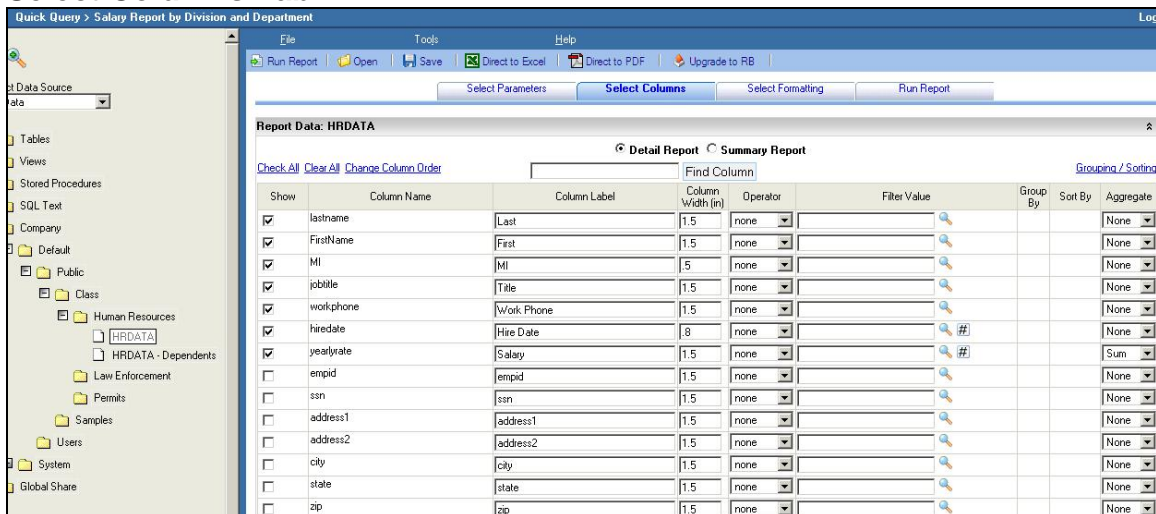
In the "Select Columns" tab, the user will select the fields to be displayed in the report and apply desired labels, grouping, sorting, filtering and aggregates. Report details are listed alphabetically and described in the table below.

Data Options	
Aggregate:	Aggregates are used to summarize data. The following aggregates are available, depending on the data format (numeric, date, etc.). Note that COUNT operates on entire rows; the other four operate on specific columns. Count = count of rows Sum = total of data Maximum = largest data Minimum = smallest data Average = data average Distinct Count = # of unique records For example, if you select "Sum" for a column that contains a monetary amount for each of the purchases made yesterday, all values in the column will be added together and the total will be included at the bottom of the report. In summary style reports, by default the "Count" value is displayed rather than the actual data, unless another aggregate is chosen.
Check All & Clear All:	Select or unselect all of the items in the Report Details area.
Change Column Order:	Columns of data will appear in your report from left to right in the same order as they are shown (top to bottom) in the Report Details section. Use the "Change Column Order" link to open the "Detail Column Order" window. Select a field and move it to the desired location using the blue and white arrows. Click "Ok" before exiting the window. The main screen will refresh with the fields displaying in the newly reordered positions.
Column Label:	The label that will appear at the top of each column of data in your report. You can change these values to be any name you like.
Column Name:	The name of each field as returned from the database or query. The Column Name value may not be changed in Quick Query.
Column Width:	The length in inches for each column of the report. You can change this value to any length to fit the data and make the report more visually appealing.
Detail Report:	Detail reports display all rows of data returned by the query. The data can be better organized by applying grouping and/or sorting.
Filter Value:	This value is the filter criteria for your report. The text box will contain your chosen criteria. You can enter criteria by typing in a value or values, or by choosing a value or values from the list displayed when you select the Lookup icon (see below).
Find Column:	Some data objects contain a large number of columns. The "Find" feature allows you to enter and locate a column name rather than scrolling and searching through a large number of columns.
# **(Format) :**	Appears next to numeric and date values only, opening a window where formatting options are available (number, date, time, percentage, currency and custom).

Group By:	Displays a check mark to indicate columns being used for grouping.
Grouping / Sorting:	Organize your report more effectively by creating groups and sorting data. The "Grouping / Sorting" window displays by selecting this link located above the "Group By" and "Sort By" columns. Select a field and add it to the "Group By" or "Sort By" list. Change the order of grouping or sorting preference by selecting the field within the list and move it up or down using the blue and white arrows. Select the "Sort Order" tab for ascending or descending sort options. After completing your selections, check marks display in the appropriate columns, identifying Fields with applied grouping and/or sorting.
🔍 **(Lookup):**	Displays the "Filter Values" window with all available values, depending on how many values are allowed in the "Max Filter Count" of the admin section "Application Values".
Operator:	Displays the appropriate filtering operators that allow you to limit the data returned from the database to your result set. Only operators that apply to the data type will be available in the dropdown list.
none	Results in all records being returned to your dataset.
<>	Returns data that is not equal to your single filter criteria.
=	Returns only data that exactly matches your single filter criteria.
>	The "Greater Than" operator returns only data that is greater than your filter criteria.
>=	The "Greater Than or Equal To" operator results a return of only data that is greater than, or exactly equal to your filter criteria.
<	The "Less Than" operator will result in a return of only data that is less than your filter criteria.
<=	The "Less Than or Equal To" operator will result in a return of only data that is less than, or exactly equal to your filter criteria.
In	Returns data that falls within the set of filter criteria selected.
Not In	Returns data that does not fall within the set of filter criteria selected.
Like	Returns data that is like the filter criteria.*
Not Like	Returns data that is not like the filter criteria.
Between	Returns data that falls between the two limits specified within the filter criteria.
is null	Returns data where the field value is null. No filter criteria needed.
is not null	Returns data where the field value is not null. No filter criteria needed.
Show:	Select or unselect individual fields in the Report Details area. All fields with a checked "Show" box will appear as a column in the report.
Sort By:	Displays a checkmark to indicate sorted columns.
Summary Report:	Summary Reports display an overview of data. Specific steps are required when building Summary Reports.

*When using the "Like" operator in Quick Query against a table or view in a *SQL Server database* the wildcard character is the percent (%) sign. Example: Looking for all last names that begin with Sm, Sm% should be entered into the filter text box.

When using the "Like" operator in Quick Query against a *Query stored in the Query Library* the wildcard character is a star (*). Example: Looking for all last names that begin with Sm, Sm* should be entered into the filter text box.

The reason for this is that when Cizer.Net runs a report against a table or view it actually builds the SQL statement and then renders the report. This means the filtering is done on the database side. When Cizer.Net builds a report against a query stored in the Cizer.Net Query Library, the filtering of data is done by the viewer. Cizer.Net runs the entire query and then MS Reporting Services filters the data before the report is rendered. SQL requires a percent sign (%) and Reporting Services requires a star (*) as wildcards.

Summary Reporting

To view a summary of information, check the radio button adjacent to "Summary Report" near the top of the window. The data must be organized into groups, and the lower level fields must be aggregated. In Summary Reports, grouped fields return distinct data, meaning that though the same data may be entered several times in a column, the query returns it only once, in some aggregate form.

Certain rules apply when creating Summary Reports:

1. At least one group must exist.
2. Fields not grouped must be aggregated. If no aggregate is selected, Quick Query applies a "Count" to any column selected that is not designated as a group.
3. At least two columns must be selected as groups in order to apply "Drill-Down".
4. If "Drill-Down" is selected, columns must be ordered appropriately.

The "Select Formatting Tab:"

In this tab the user may define certain details such as the title of the report, the layout and colors in the report, and other important information you would like to include that does not come from the database itself.

There are two options for formatting the rows of data returned: "Select Table Properties" or "Select a Template". Choosing "Select Table Properties" provides manual formatting options for column and detail row background and text.
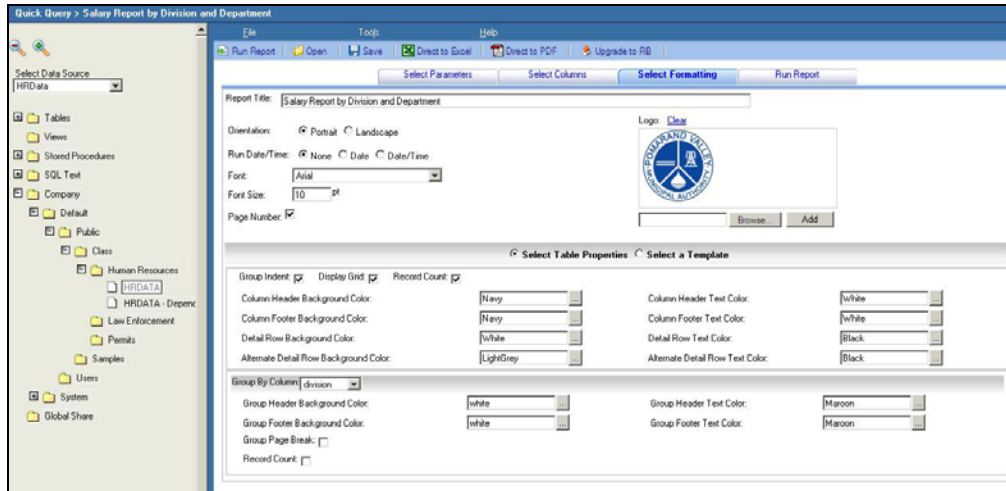
Alternatively, the "Select a Template" option allows you to choose a previously designed table template stored in the Template Library.
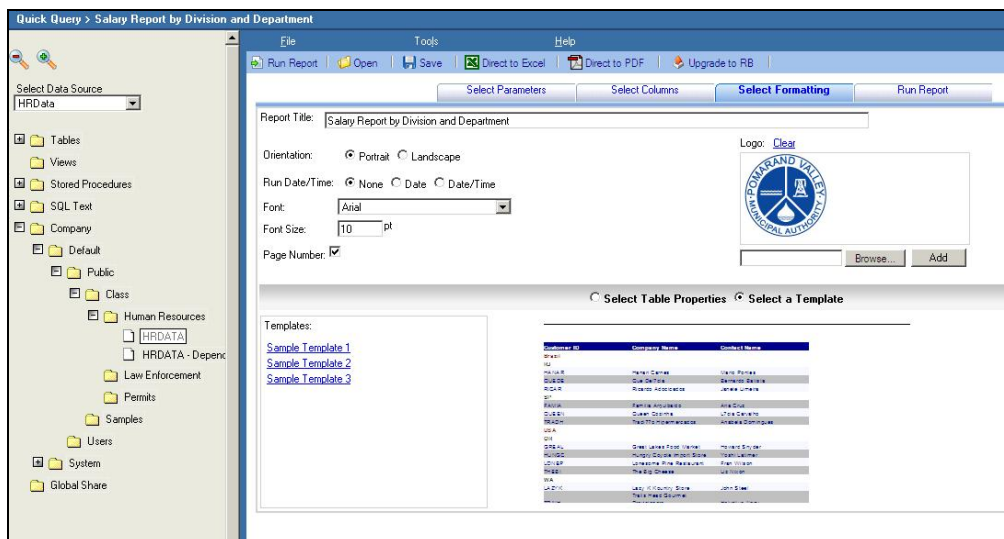
Adding a Chart

If you are creating a Summary Report, the option to add a chart with basic formatting is available. When the report is run, the chart will appear above the summary table. Note that you must have an ungrouped, aggregated field selected in the Select Columns tab which the chart uses as the Value field. If there is one grouped field, that field is used as the chart Category Grouping. If there is more than one grouped field, only the first grouped field is used as a Category Grouping.
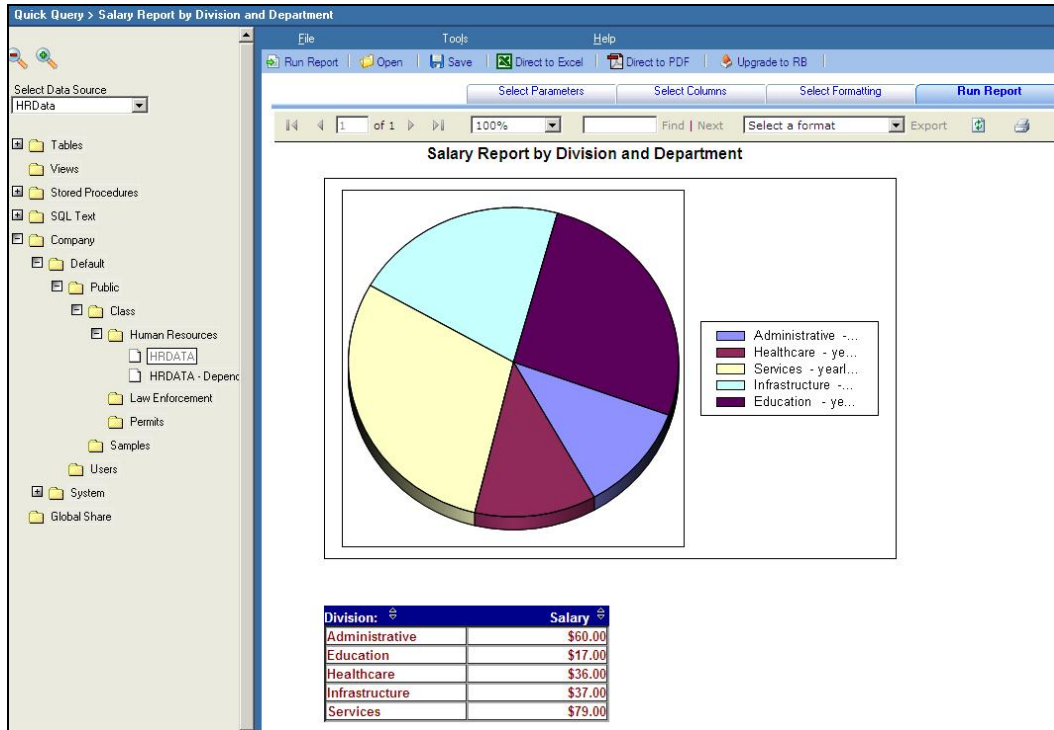
The table below is a list of all the properties that may be controlled on the "Select Formatting" tab.

Formatting Options	
3D: *(available with Summary Reports)*	Give your chart a 3D look by selecting the 3D checkbox.
Chart Palette: *(available with Summary Reports)*	Choose from one of seven color schemes: "Default", "Earth Tones", "Excel", "Gray Scale", "Light", "Pastel" or "Semi-Transparent".
Chart Type: *(available with Summary Reports)*	To add a chart above your data results' table, choose from one of the following chart types: "Area", "Bar", "Column", "Doughnut", "Line" or "Pie".
Chart Width/Height: *(available with Summary Reports)*	Designate the size of the chart in inches by entering integers in the width and height boxes.
Column Header and Footer Background Colors:	Choose a background color for the Column Header or Footer. Standard web color names and hexadecimal values are accepted. The ellipsis button to the right of the text box displays the three-tab color palette window, where you can chose any of the standard "web-safe" colors, a variety of named colors, or design a color using the red, green and blue custom sliders.
Column Header and Footer Text Color:	Choose a text color for the Column Header or Footer. Standard web color names and hexadecimal values are accepted. The ellipsis button to the right of the text box displays the three-tab

	color palette window, where you can chose any of the standard "web-safe" colors, a variety of named colors, or design a color using the red, green and blue custom sliders.
Data Point:	Values are displayed at the appropriate point on the graph itself.
Detail Row and Alternate Detail Row Background and Text Colors:	Choose background and text colors for the Detail Rows. Standard web color names and hexadecimal values are accepted. The ellipsis button to the right of the text box displays the three-tab color palette window, where you can chose any of the standard "web-safe" colors, a variety of named colors, or design a color using the red, green and blue custom sliders. The second Detail Row Colors will be the color of the alternating row.
Display Grid:	When checked, gridlines will show in the report to separate the rows and columns of data. This option holds if the report is printed as well.
Drill-Down:	Only available in Summary Reports, Drill-Down enables the first layers of grouped columns to be expanded in order to view the next grouped level.
Font:	Choose a Font from the drop-down list. All column headers and detail rows of the report will display in the chosen font.
Font Size:	Type a Font Size into the text box. All column headers and detail rows of the report will display in the chosen font size.
Group By Column:	Columns selected for grouping in the "Select Columns" tab are listed in the Group By Column drop-down list. Select a group from the list to apply formatting to that group. If no columns have been selected for grouping in the "Select Columns" tab, the Group by Column and group formatting options do not appear.
Group Header Background and Text Color:	Choose background and text colors for the Group Header(s). Standard web color names and hexadecimal values are accepted. The ellipsis button to the right of the text box displays the three-tab color palette window, where you can chose any of the standard "web-safe" colors, a variety of named colors, or design a color using the red, green and blue custom sliders.
Group Footer Background and Text Color:	Choose background and text colors for the Group Footer(s). Standard web color names and hexadecimal values are accepted. The ellipsis button to the right of the text box displays the three-tab color palette window, where you can chose any of the standard "web-safe" colors, a variety of named colors, or design a color using the red, green and blue custom sliders.
Group Indent:	In Detail reports, when checked, the report detail rows will be indented a couple spaces beneath each group description.
Group Page Break:	When checked, inserts a page break after each record grouping.
Legend: *(available with Summary Reports)*	Provide a legend for your chart by selecting the "Legend" checkbox. Legends appear to the right of the chart.
Logo:	Insert a company logo or other .jpg, .gif or .png file by utilizing the "Browse" and "Add" buttons. The image will appear at the top left of the report. Remove the image by clicking the "Clear" link.

Orientation:	Choose the "Portrait" or "Landscape" radio button for the preferred page layout. "Portrait" is selected by default.
Page Number:	When checked, the page number will display at the bottom right of each page of the report.
Record Count:	When checked, the total number of all records is displayed at the top right of the report. Group record counts appear in the group header, after the group name, as (Count: X).
Report Title:	Type a title for your report into this text box.
Run Date/Time:	Choose the "None", "Date" or "Date/Time" radio button for the desired display on the page footer. "None" is selected by default.
Select Table Properties:	Displays table property formatting options.
Select a Template:	Displays a list and preview of saved Table Templates.

SQL Validation

To view and validate the SQL built by Quick Query, select "Test SQL" from the tools menu.
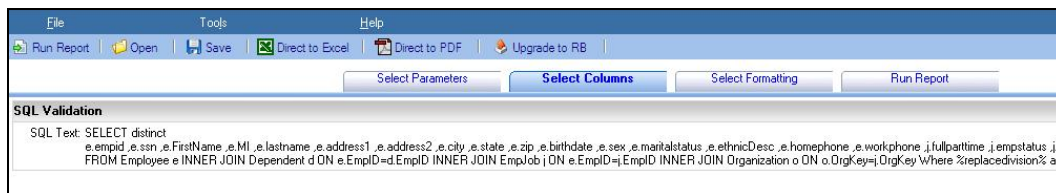
This section appears at the top of the tabs, displaying the SQL text that is generated to create the Quick Query report. If the report is built from a table or view, the Record Count and SQL Execution Time will also be displayed. Record Count and SQL Execution Time are not displayed if the report is built from a stored procedure or stored query. If there is an error in the SQL statement it will be displayed in the SQL Validation section as well.

Note: SQL Validation is only shown if you have selected "Test SQL" from the tools menu. It is not shown by default while you are building the Report.
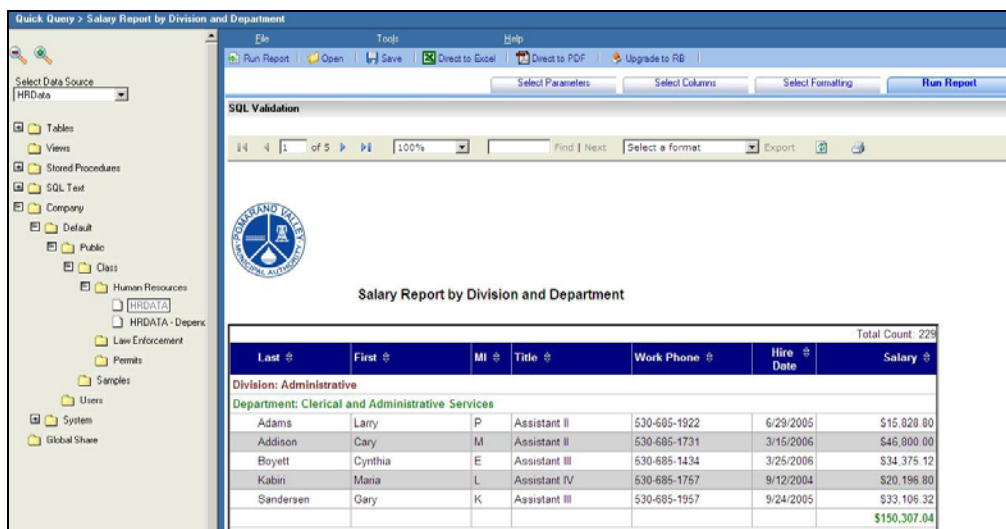
Report Viewer

To view the results of your report within Quick Query, open the "Run Report" tab after all Report Data options and formatting have been selected. The report is displayed in the Report Viewer. Features of the Report Viewer are described in the table below.

Each column header contains an interactive sort button to the right of the column header text. The interactive sort button toggles between ascending or descending in order to change the sort order without having to return to the Select Columns tab and

then rerunning the report. If a field is grouped and also displayed as a column, the interactive sort button sorts by group rather than the column. *NOTE: This feature is not compatible with Reporting Services 2000; no arrows will be displayed.*

Note: Cizer.Net utilizes one of three types of viewers: iFrame (min requirement: RS 2000 w/ SP2), local or remote. The viewer you see is decided upon by your Cizer.Net administrator. The "print" icon appears in IFrame and Remote, but not in the local viewer. Also, the Local viewer will not deploy a report to Reporting Services.

Toolset Items	
Navigational Arrows:	These standard buttons move to the first or last page of the report or move forward or backward one page at a time.
Viewer Percentage:	This number indicates the viewing size of the report within the viewer. The larger the percentage the larger the report will be displayed on the screen.
Find | Next:	If you would like to navigate directly to specific information, you can type that information into the box then click "Find". Your viewer will navigate to the first instance of the information on the page of the report being viewed. "Next" will take you to the next instance of the specified information.
(Select a Format) Export:	Use the drop-down box to select the export format you would like for your report, then click on the word Export to open or save the report in that format.
🔄	Refresh the report.
🖨	Print the report.

Cizer Quick Query Report Building Example

The first step in creating a report is to choose the data set. In this case the data set is a query.

1. Make sure that LawEnforcementDW shows in the **Select Data Source** drop-down.

2. Open the **Public** folder, and then open the "Law Enforcement" folder in the tree view on the left.

3. Select **Fine Revenue** from the queries listed and the design environment will populate as follows:
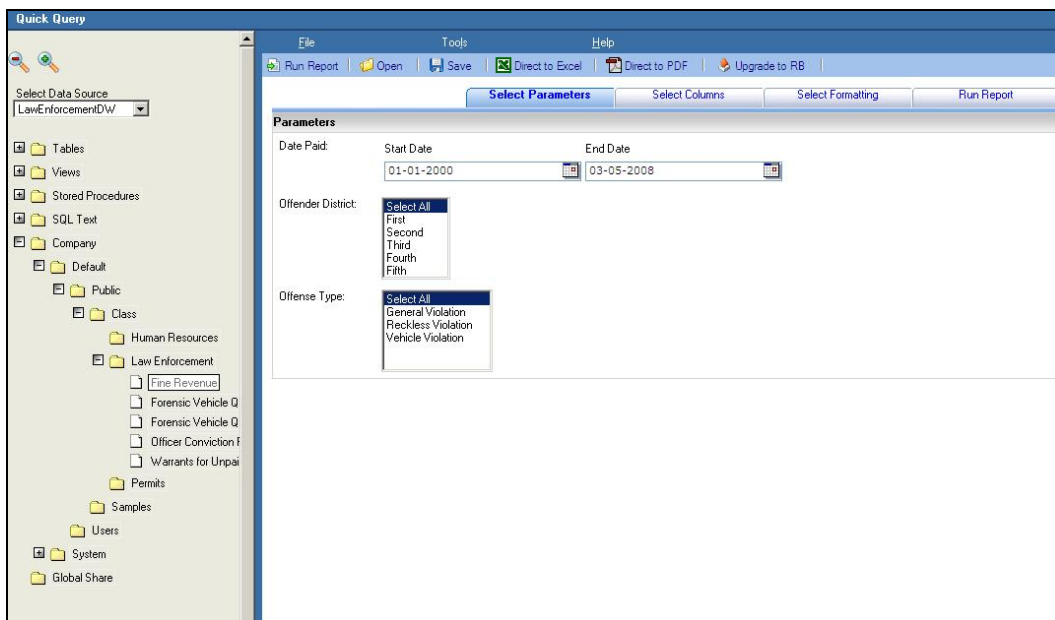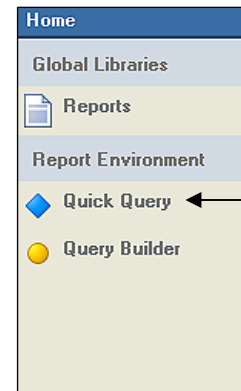
Once the user selects the desired query, the parameters tab will appear if there are parameters attached. Parameter selections should be made before the report is run.

4. Navigate to the "Select Columns" tab.
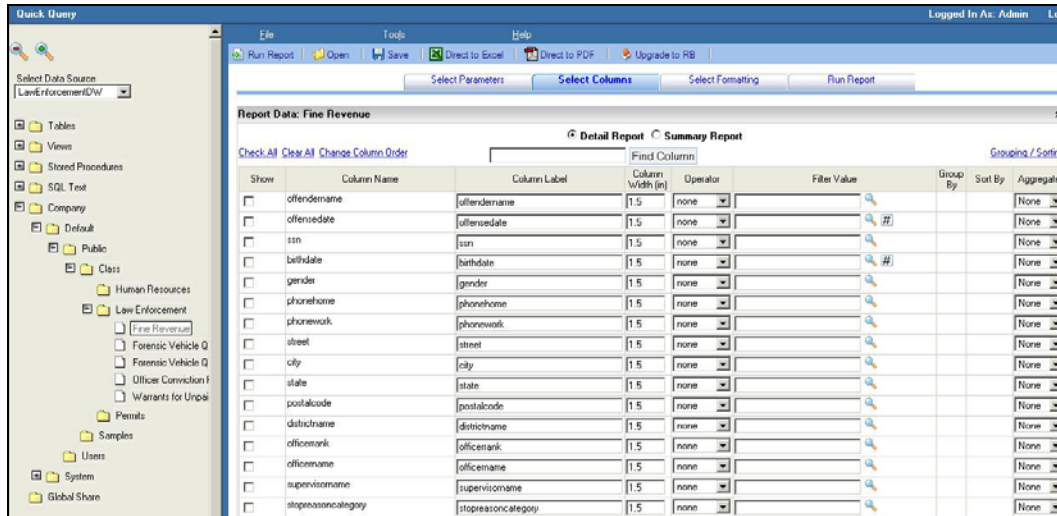
Selecting the Fields for the Report

Checking the boxes in the left column will determine which columns are returned when this report is run.

5. Check offendername, offensedate, street, city, and state, postalcode and transactionamount.

After the boxes are checked, clicking on **Change Column Order** opens a window in which the columns may be re-ordered to suit the user's needs.
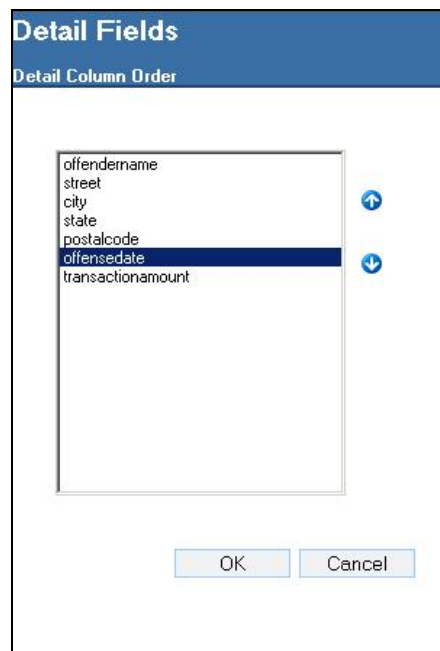
Selecting a field from the dialog box and clicking either the up or down arrow will allow the user to organize the data in the manner desired.

6. Order the columns in the Detail Column Order window as follows: offendername, street, city, and state, postalcode, offensedate, and transactionamount then click **OK**. The following Report Data screen should display:

If the user has a pop-up blocker enabled, it may interfere with the appearance of this window. If your pop-up block is enabled in Internet Explorer, you will need to edit your Popup Blocker settings to allow pop-ups from CNR. If you do not have permissions to adjust this on your own machine, ask your network administrator for assistance. Allowing pop-ups from CNR does not open your browser up to pop-ups from other sources; it will only allow the CNR application pop-ups to work correctly.

Grouping and Sorting in the Report

The user may add grouping and sorting to the report by clicking on the **Grouping/Sorting** link.

> 7. Click on the **Grouping/Sorting** link on the right just above the Report Data fields.
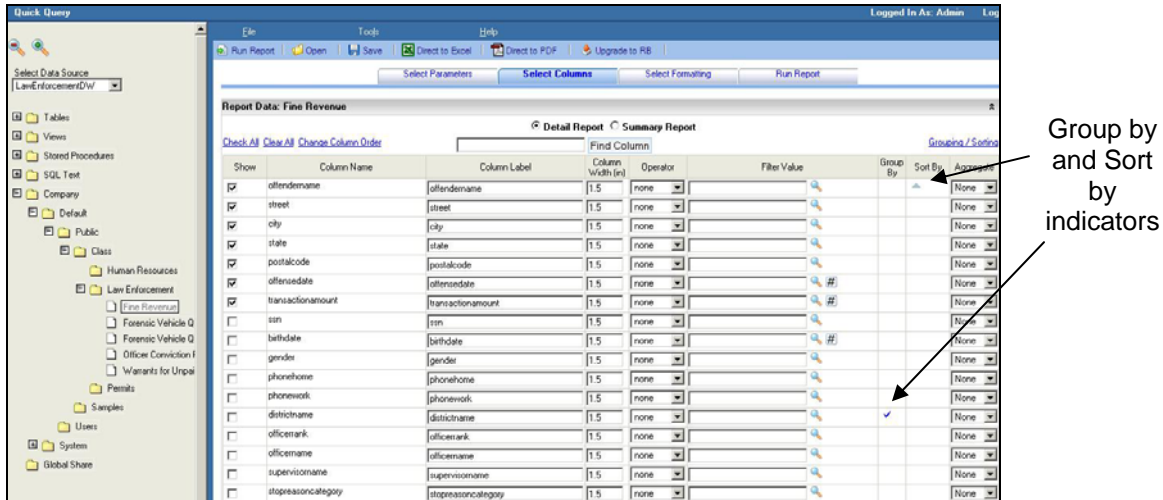
Fields are added to the grouping by selecting them from the window on the left and clicking the arrow pointing to the **Group By** window. Fields are removed by selecting them from the **Group By** window and clicking the arrow pointing away from this window. The user may change the group hierarchy by selecting a field in the **Group By** list and using the arrows to the right of this window to move the field up or down in the list.

> 8. Group the report by **districtnumber**.

The same procedure applies to managing the **Sort By** window. The report may be sorted ascending or descending by each field in the **Sort By** window by selecting the field and clicking the **Sort Order** link.

> 9. Sort the report by **offendername**.

Once Grouping and Sorting options have been selected and you return to the Quick Query report screen, you'll see a ✓ (blue checkmark) next to the grouped fields. Arrows appear in the Sort By column of sorted fields; ▲ (gray up arrow) indicating ascending or ▼ (gray down arrow) indicating descending.

Column Labels

The **Column Label** fields in the Report Data window allow the user to alter how a column will be displayed in the report. The **Column Width** fields allow the column widths to be resized in order to improve the appearance and readability of the report.

10. Correct the column labels and widths to the values shown above.

The **district** column label contains a colon. This label should contain a colon plus a space following to display correctly in the report. This procedure is standard for labels that will be included as Groups. In this case if the district value is **First**, the Group Header will read **District: First**.

Filtering Data

The **Operator** and **Filter Value** columns allow the user to reduce the amount and type of data returned, zeroing in on a more useful report. In this case, the data returned will be limited to records where the **Offense Date** is **< 1/1/2007**. You will notice a search function that would allow the user to find a specific column when many columns are available. This feature only works on tables, views, and simple queries. To the left of the search box is a drop down allowing the search method to toggle between "contains" and "starts with" searches.

11. Click on the magnifying glass in the **Offense Date** field.

12. Select **< 1/1/2007** for the filter value.

The operator column will automatically select an = sign in this instance, if left alone.

Formatting Data

The **#** symbol to the right of each column in the report data window indicates the ability to format how the data in each column will display. Cizer Quick Query allows predefined and custom formats to be used.

13. Click on the # symbol to the right of **Transaction Amount**. You should see the following screen:

Format > UnitPrice

⊙ Pre-defined ○ Custom

Default	$123,456.00
Number	$123,456.0
Date	$123,456
Time	
Percentage	
Currency	

Custom Format:

[Apply] [OK] [Cancel]
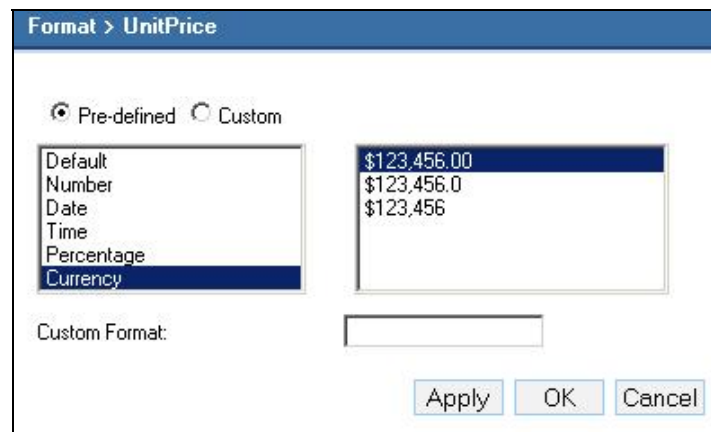
14. Select Currency, **$123,456.00** and click **OK**.
15. Format the **Offense Date** column to show the date only, ex: 02/07/08.

Find Column

Should your query have a large data set, you can use the **Find Column** search box to locate a column you are looking to use in your report. Simply type the name of the column you are searching for and click **Find Column**. Cizer Quick Query will scroll down to the desired region of the report data screen.
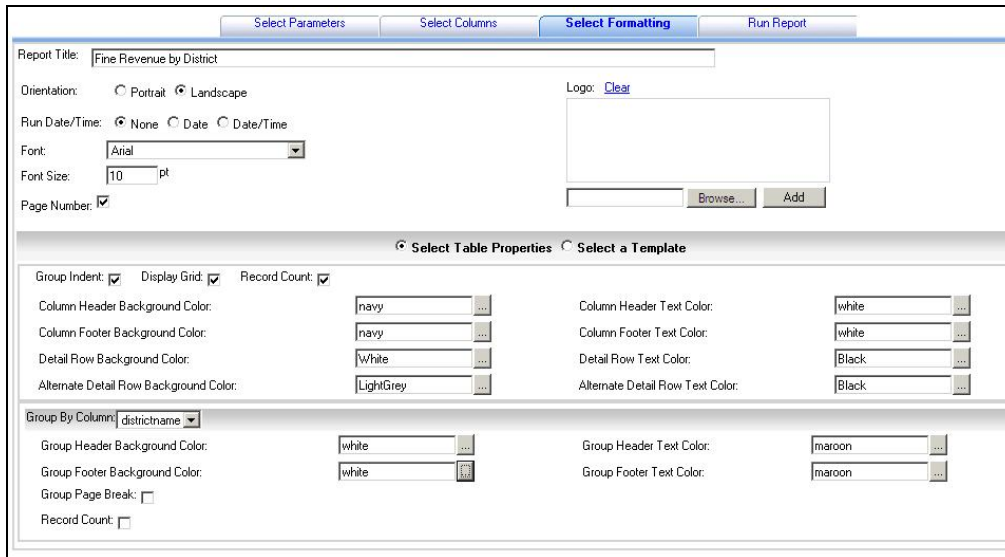
Aggregating Data

Quick Query allows the user to aggregate data with a drop down on the far right side of the Select Columns tab. Aggregates such as average, minimum, maximum, sum, count and count distinct are offered.

16. Aggregate the **Transaction Amount** column to show a sum.

Formatting the Report

17. Select the Select Formatting tab.

The overall appearance of the report is managed through the Select Formatting Tab. The **Report Title** field displays the report title. The user may choose the orientation of the report by clicking the appropriate radio buttons. The date and time that the report was run are appended to the report by selecting the desired format from the **Run Date/Time** radio buttons. A page number may be included by checking the **Page Number** box. Fonts and font sizes may be altered in the appropriate fields. A logo may also be added.

The user may also select whether a record count is included, whether the gridlines separating each cell will be displayed, and whether the groups are indented slightly. Column header and footer colors may also be selected. The background color is displayed in the leftmost boxes while the text color is displayed in the rightmost boxes. In Quick Query, you have the option of alternating the colors of the detail rows.

While the "Select Table Properties" radio button is selected, the properties of each group may be modified by selecting the particular group from the "Group By Column" drop-down from the upper left of this panel. Checking the Group Page Break box will create a new page for each group. Checking the Record Count box will add a record count to the report.

18. Alter all of the values to mirror the screen image above and click **Run Report.**

Running a Quick Query Report

To run a Quick Query report simply click on "Run Report" at the top left of the screen, or select the "Run Report" tab. After you run the report you will see the following screen appear while the report is being generated.
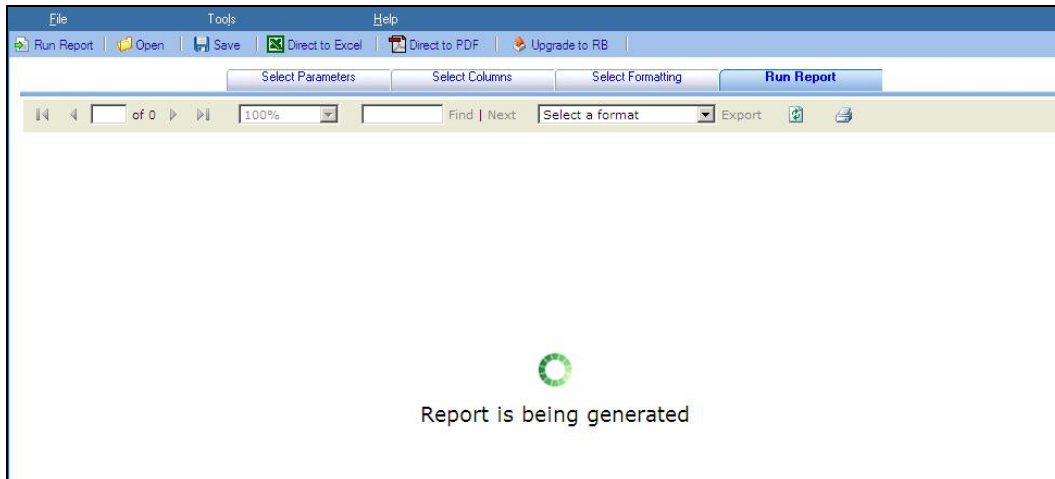
When the report has completed running you will see the following screen.

Printing a Report from the Reporting Services Viewer
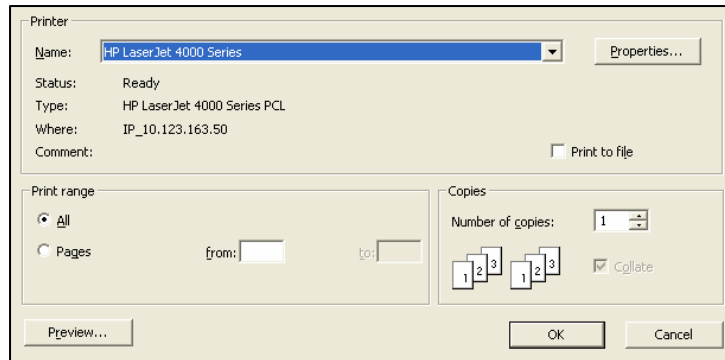
Print the report by clicking the printer icon on the Reporting Services Viewer toolbar (next to the data refresh button). This will take you to your default printer dialog box for your normal Windows printing choices. If this is the first time you've printed, you will be asked to authorize the installation of an ActiveX control delivered by Reporting Services before you can print. Once that is on the machine from which the browser is being used, it will not appear with subsequent print requests. *(Note: There is no print icon when using the local viewer; the report must be exported to another format before it may be printed.)*

Exporting Report to Excel, PDF or Other Formats

You may export the report within the Reporting Services Viewer by selecting a format such as Acrobat PDF or Excel from the dropdown "Select a Format" list; then click the Export link.

If you export to Acrobat PDF or Excel, you must have the respective supporting software on your client machine to open the files and display them on the screen or to save them.

If you click on the **Direct to Excel** icon a File Download box will appear. If you click the **Open** button in the File Download box, the report will open in Excel as soon as it finishes rendering. If you click the **Save** button in the file Download box, you may choose where to save the file without opening Excel.
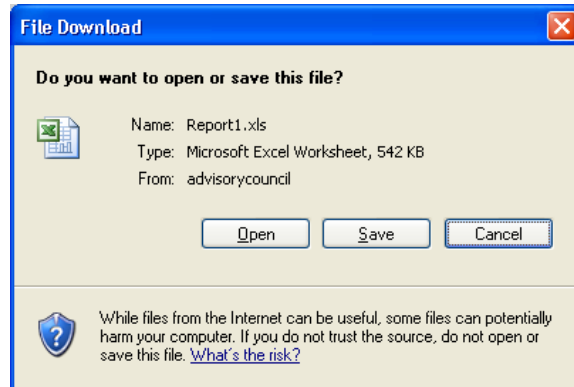
If you select the **Open** button from the File Download box, the report will open directly into Excel and display like this:

The report can also be exported to many different file types (HTML, Excel, Web Archive, PDF, TIFF, CSV, and XML). However, the 2 most common are Excel and PDF. The following shows an example of this report being exported to a .PDF file.

The navigation arrows at the top left allow the user to navigate to the first and last pages of the report, or to page through the report a single page at a time.
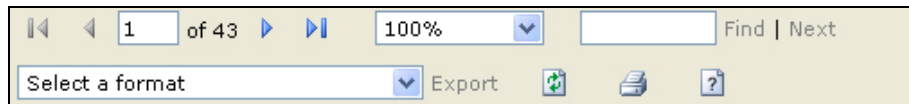

Saving a Quick Query Report

To save a Quick Query report, select **Save** from the file menu. The default folder into which your reports will be saved is your Personal folder.

 You may move reports from your Personal folder into other folders within the Report Library provided you have permissions set that allow you to make these changes to where your reports are located.
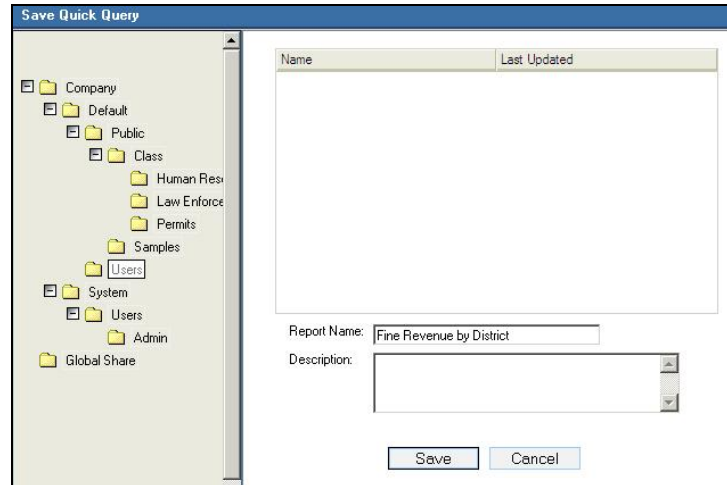
Here the user will be able to choose in which folder a report may be saved and the title. A **Description** may be added to the report as well. This **Description** may be altered later by selecting **Properties** from the file menu.
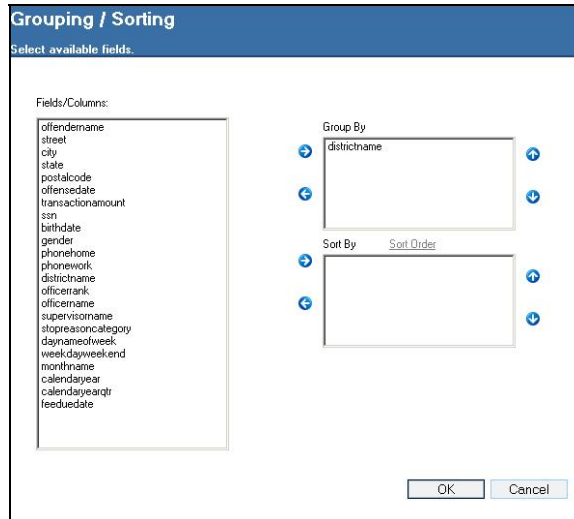

The **Description** that is added to a report is what is displayed on the Home Page for the Favorites reports when the **Show/Hide Detail** button is selected to **Show**.

Summary Reporting

To view a summary of information, the data must be organized into groups, and the lower level fields must be aggregated. In Summary Reports, grouped fields return distinct data, meaning that though the same data may be entered several times in a column, the query returns it only once.

> 19. Click on the **Select Columns** tab.
>
> 20. Select the **Summary Report** radio button.

21. Select **Grouping and Sorting**; group the report as follows and click **OK**:

22. Select the **only** the **District** and **Transactionamount** columns to be displayed in the report.

23. Select **Sum** from the aggregate drop down from the **Transactionamount** column.Under the **Select Formatting** tab check the **Select a Template** radio button and select **Sample Template 1**.

24. Run the report.

25. To add a chart, select the **Select Formatting** tab. Select **Pie** as the chart type, check the Legend, Data Point and 3-D checkboxes.

Exercise 1: Creating a Quick Query Forensic Vehicle Report

1. Click on **Quick Query** from the portal page
2. Select the **LawEnforcementDW** datasource from the drop-down.
3. Select the **Forensic Vehicle Query** from the **Law Enforcement** folder in the **Class** folder.
4. Click on the **Select Columns** tab.
5. Select the following columns and reorder them as follows:
    - **Offendername**
    - **Licensestate**
    - **Licenseplate**
    - **Street**
    - **City**
    - **State**
    - **Postalcode**
6. Group the report by **make** and **model**.
7. Sort by **offendername**.
8. Rename all of the columns, taking care to enter a colon and a space after make and model.
9. Resize column widths as necessary.
10. Click the **Select Formatting** tab.
11. Title the report **Forensic Vehicle Report**.
12. Upload the Pomarand Valley logo.
13. Change the column header and footer to white on a navy background
14. Change the **make** group (header and footer) to maroon on a white background.
15. Change the **model** group (header and footer) to green on a white background.

Exercise 2: Creating a Quick Query Human Resources Report

1. Click on quick query from the portal page
2. Select the **HRDATA** datasource from the drop-down.
3. Select the **HRDATA** query from the **Human Resources** folder in the class folder.
4. Click the **Select Columns** tab.
5. Select the columns below and order them as follows:
    a. **Lastname**
    b. **Firstname**
    c. **MI**
    d. **JobTitle**
    e. **Workphone**
    f. **Hiredate**
    g. **Yearlyrate**
6. Group the report by division and department.
7. Change the column labels to be more readable, taking care to place a colon and a space at the end of the department and division labels.
8. Resize column widths.
9. Create a filter limiting the results to records with an **empstatus** of "A."
10. Format the **hiredate** column to show only the date and not the time.
11. Format the **Yearlyrate** column to show as currency to two decimal places.
12. Add a sum to the **YearlyRate** column
13. Click on the **Select Formatting** tab.
14. Title the report **Salary by Division and Department**.
15. Upload the Pomarand Valley logo.
16. Change the column header and footer to white on a navy background
17. Change the **division** group (header and footer) to maroon on a white background.
18. Change the **Department** group (header and footer) to green on a white background.

Exercise 2b

1. Deselect all the columns except for yearlyrate.
2. Select the department column to show.
3. Set the report to group only by department.
4. Click the summary report radio button.
5. Select the **Select Formatting** tab.
6. Select **Pie** as the chart type.
7. Check the Legend, Data Point and 3-D checkboxes.

Chapter 3: Cizer Query Builder

THIS CHAPTER WILL COVER:

- ❖ Logging In as a Different User to see Differences Through Permissions
- ❖ Getting Familiar with the Query Builder Interface
- ❖ Building a Query Using the Query Builder Wizard
- ❖ Viewing and Moving Query Elements in the Query Builder Window
- ❖ Viewing the Returned Data Set to Validate Accuracy
- ❖ Saving the Query for Future Use

WHAT IS CIZER QUERY BUILDER?

Cizer Query Builder (CQB) is a browser-based graphical user interface tool for step-by-step building to allow the creation of more complex reports. In Quick Query, for example, you can create a report against a Table, a View, a Stored Procedure, or a User Query. However, you can only build a report against one of those data elements, e.g., a single Table, at a time.

In a relational database, there are very few tables that will include all the data elements required to make a complete report. Views generally combine fields from a set of tables that can be linked to bring back more complex data sets, but the Views provided for you in the CNR environment may not include the tables you need for a specific report.

Cizer Query Builder allows you to build queries with fields from multiple tables 'on the fly' and then select them to build a more complex report. When you start creating a query in Query Builder, a Query Building Wizard will guide you through the process of selecting tables and fields, grouping, sorting those tables and fields, and joining the tables so that the data returned in the report is correct. Once the Query is assembled, you can review the record set returned by the query based on the selected tables, filters and joins, view the SQL statement, and save it in the Global Query Library for future use. While you need to know your data and be able to identify the data elements you want to include in your report, the Cizer Query Builder allows you to create the queries you need without extensive training in SQL (Structured Query Language) because the Query Builder creates the appropriate SQL for you based on your choices in the wizard.

While the average business user who merely runs reports or uses the point & click interface of Quick Query to build reports may not be comfortable with the Query Builder tool, it is by no means beyond the capability of the average Cizer Report Builder user to create reports.

Logging In

Double Click the CNR icon on your desktop. You will see the following log in screen.
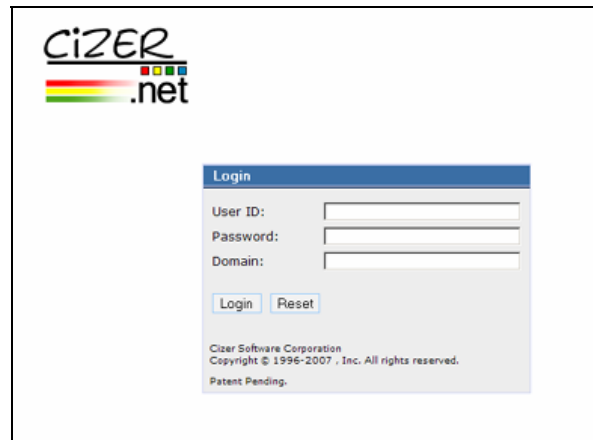
In this section, we're going to log in under a different User ID for which different permissions have been set. This will allow us to see a different set of information on the screen. On our previous section, we were working with a User ID that gave us limited rights. Now we're going to use an ID that will allow us to use any previous modules as well as the Query Builder and Report Builder modules. When you've successfully logged in, note how the Home Page now displays less information and tool buttons. This Login ID and password are only for class purposes and are not intended as a model for User IDs within a company. Your company Cizer administrator will provide you with an appropriate Login ID and Password based on the company's requirements.

Fill in the User ID and password as shown below:

- User ID: **TerryCRB**   (this field is not case sensitive)
- Password: **terrycrb**   (this field is case sensitive)
- Domain: _____   (this field will not be needed for class)

From the Cizer.Net Home Page, select the **Query Builder** link from the Control Panel to begin.
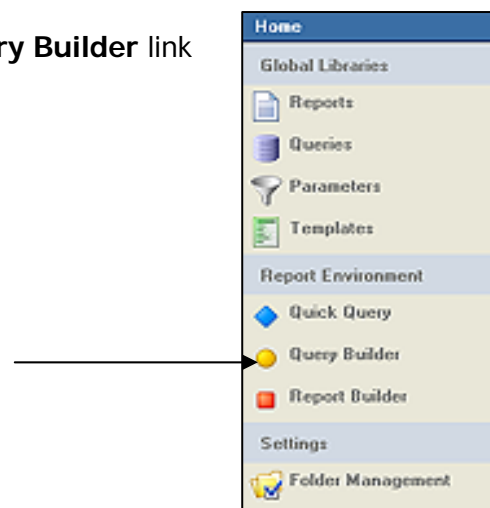
The Query Builder interface will be displayed as shown below:
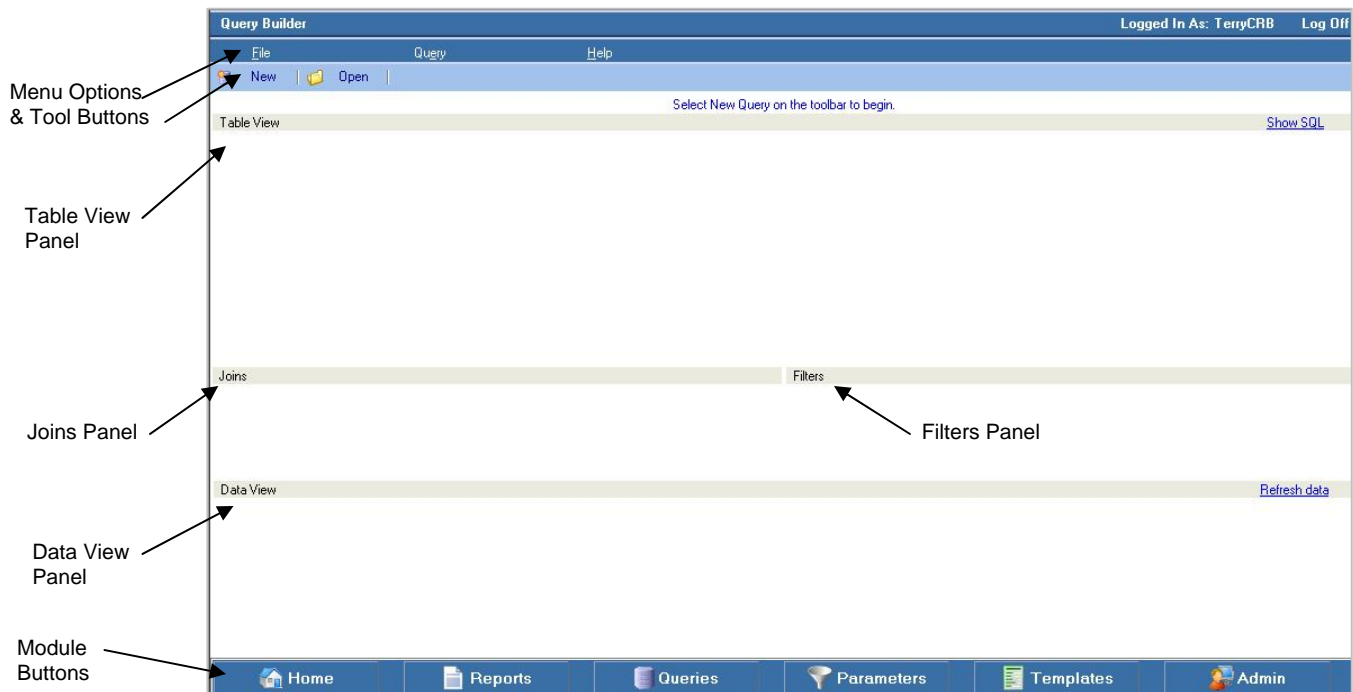
There are six panels that form the Cizer Query Builder interface. The toolset remains at the top of the screen with drop-down menus and quick links. The Cizer.Net navigation bar remains at the bottom of the screen with links that return you to the Portal page and provide access to the Global Libraries and the Admin Interface, if you have been assigned rights to these components.

When you first open Query Builder, two icons will be visible in the Tool Bar under the Cizer.Net navigation menu. These icons are **New Query** and **Open**. Once a data source has been selected, a new query has been built or an existing query opened, more icons are displayed in the Tool Bar.

Retrieving data from your database and formatting it in a way that is easy to understand is imperative for efficient business practices. In the past, to build a SQL query, one had to be proficient in the database schema, table and field relationships, and proper Transact-SQL syntax.

Query Builder makes query construction much simpler. The browser organizes the chosen Tables and the Joins and Filters Wizards display options with radio buttons and dropdown lists for easy selection and configuration. The returned record set is displayed in the Data View panel so you can check to see if it is the data you really need for your report.

Building a Query
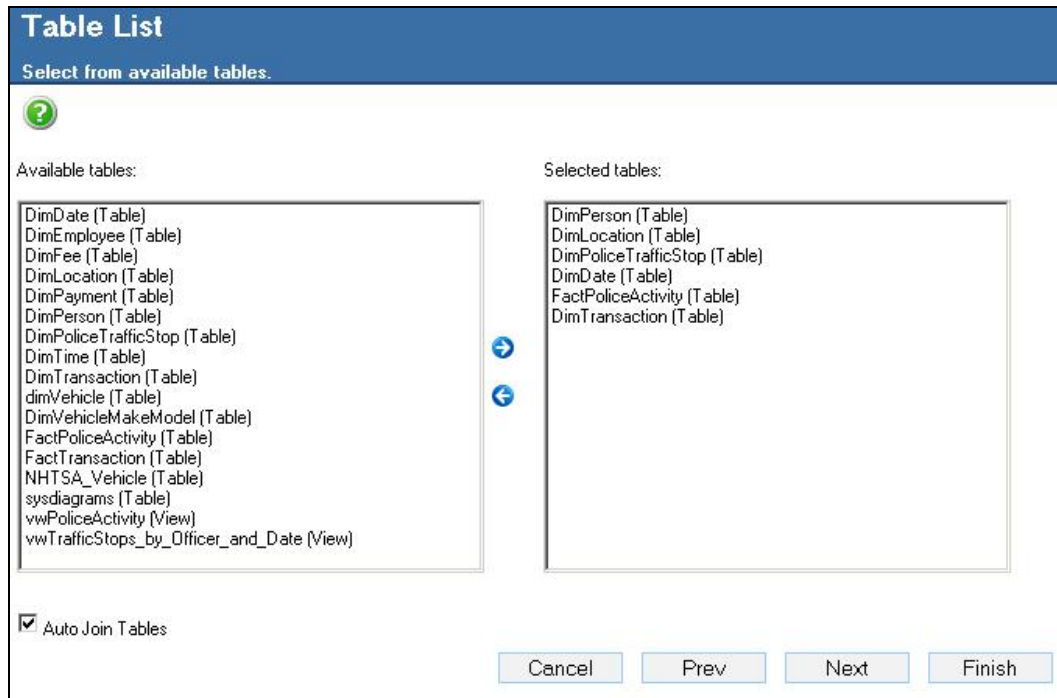
7. To begin building a query, select **New** from the toolset menu.

The wizard window opens and you are prompted to select a data source.

2. Select **LawEnforcementDW** and click **Next**.

All the tables to which you have been granted access are displayed in the **Available Tables** column. If you do not see the Table you need, contact your Cizer.Net Administrator to request rights to that table.

Table List

In the **Table List** window, select the tables you need for your query from the **Available Tables** column. You can multi-select tables by holding down the **Shift key** and selecting a contiguous group of tables, or by holding the **Ctrl key** and selecting individual tables.

3. Select the **DimPerson**, **DimLocation**, **DimPoliceTrafficStop**, **dimdate**, **FactPoliceActivity** and **DimTransaction** tables.   Click Next.
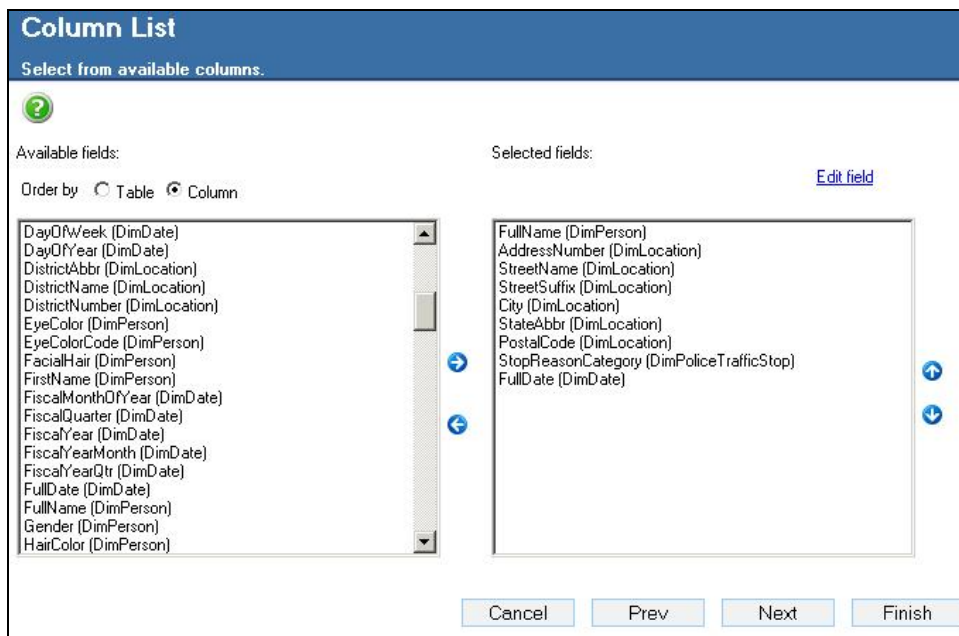
4. Move the selected tables into the **Selected Fields** column using the **Right** arrow. Use the Left arrow to remove tables from the **Selected Fields** column.

By default, the **Auto Join Tables** checkbox is checked. All tables with linking fields/columns will be automatically joined. If you do not wish to have all possible links connected, uncheck the **Auto Join Tables** checkbox. If you would like to configure your own joins, or edit the automatic joins, you may do so after completing the New Query wizard, or after updating the Table List.

5. Click **Next**.

Column List

In the **Column List** window, the **Available Fields** column contains all the fields of the tables you have selected. For easier viewing, you may sort the fields by Column name or by Table. The Column (field) name is listed first, followed by the **Table name** in **parentheses**. Using the same methods described above for the Table List, select and move the fields needed for your query into the **Selected Fields** column. You can reorder the fields after they have been moved to the **Selected Fields** column by highlighting the field you wish to move and clicking the up and down arrows.

The terms **Field** and **Column** are used **interchangeably** in this document to represent columns in the database or query.

6. Select FullName(DimPerson), AddressNumber(DimLocation), StreetName(DimLocation), StreetSuffix(DimLocation), City(DimLocation),
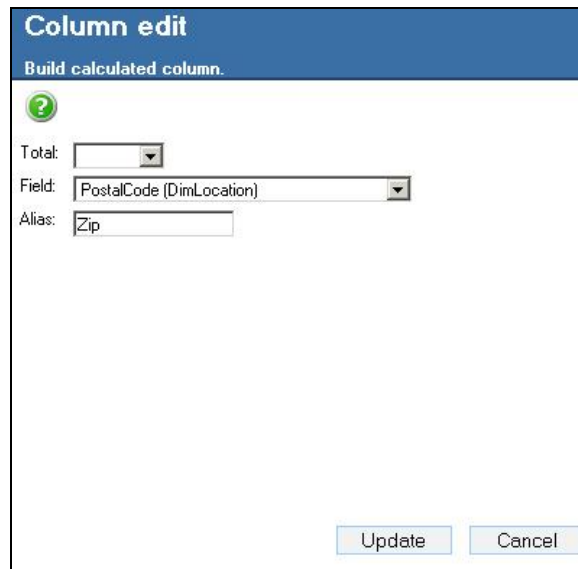
StateAbbr(DimLocation), PostalCode(DimLocation), StopReasonCategory(DimPoliceTrafficStop)and FullDate(DimDate).

Each column is followed by the table name in parentheses, and the column list is ordered by default first by table name, and then field name. Changing the **Order By** radio buttons will order the columns by field name.

Column Editing

Click on the **Edit Field** link in the **Column List** window to display the **Column Edit** window below, where calculations and an alias may be applied to a selected field.

Calculations Available in Column Edit (Total Dropdown field):

SUM	Returns a sum of a set of values in a field.
AVG	Returns an average of a set of values in a field
COUNT	Returns a total number of records.
MAX	Returns a maximum of a set of values in a field.
MIN	Returns a minimum of a set of values in a field.

7. Alias StateAbbr(DimLocation) as State, PostalCode(DimLocation) as Zip.

8. From the **Column List** window, click **Next**.

Sorting

Data within a field may be sorted by placing the field in the Sort By column of the Grouping / Sorting window. Once in the Sort By column, select a field and click the Sort Order link to choose the Ascending or Descending option. If you do not choose a Sort Order option, the data will be placed in Ascending order by default.
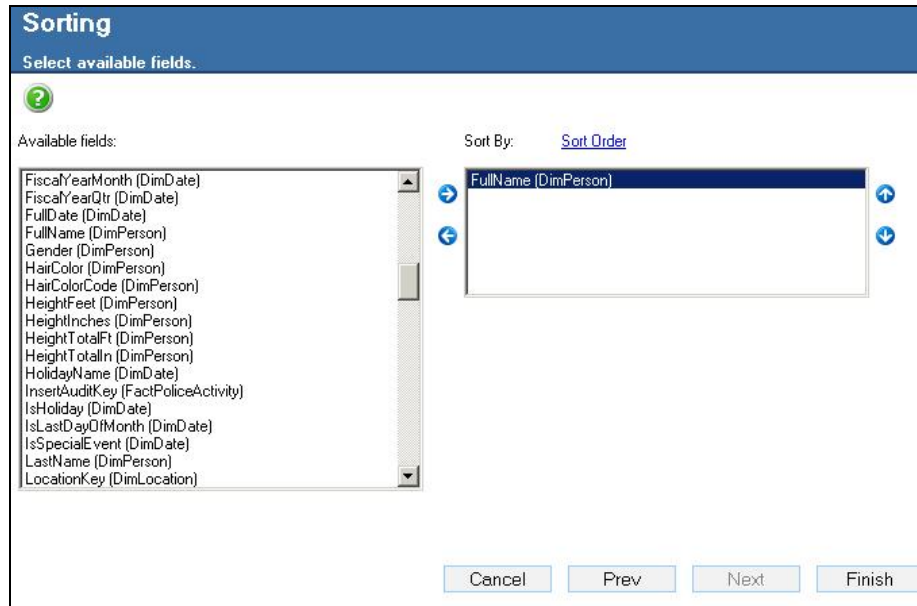
Adding a **Sort Order** will automatically place a **Sort By statement** in the query. If a calculation such as **SUM** has been added to a field, a **GroupBy clause** will automatically be added to the SQL statement.

> 9. Add **FullName(DimPerson)** to the sorting listbox, and click **Finish**.

The following screen should now be displayed. The tables are joined by dark lines, with text labels denoting which column of each table is used to make the join.
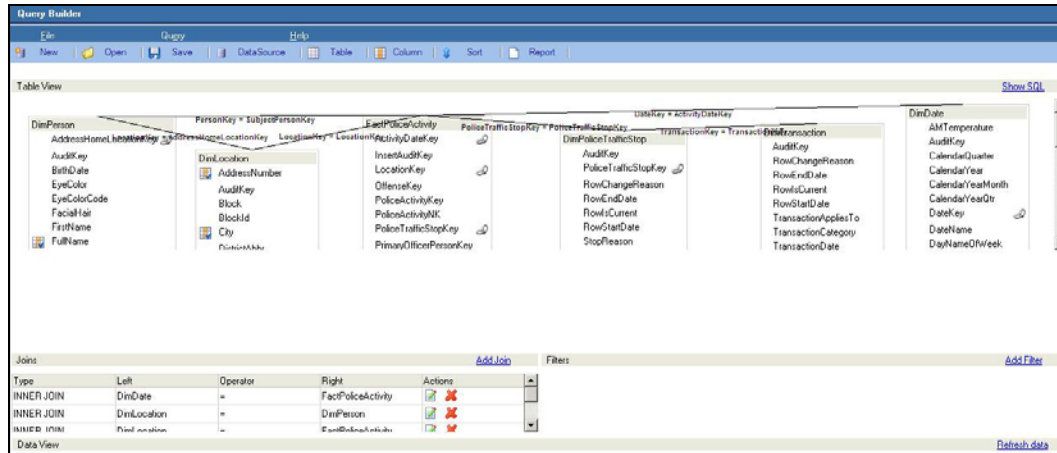
10. Click on the **Save** icon and save the query as **CQB Walkthrough**.

The table below provides a description of each toolset function you will see in the Query Builder window.

Toolset Items:

	New:	Opens the Query Builder wizard.
	Open:	This icon opens the Query Library where you can select a previously built query for editing.
	Save:	Save your query to the Cizer.Net Query library where your query can be accessed for use in Quick Query or Report Builder.
	Datasource:	Choose another data source by selecting this icon.
	Table:	Opens the Table List window where you can add or remove a table or view to the query, or change the automatic table linking option.
	Column:	Opens the Column List window where you can add or remove fields from the column. You may also create an alias for the column and/or add a calculation to be performed.

⇕	**Sort:**	Apply sort by functions to fields in the query.
▯	**Report:**	Saves your query to the Query Library; then opens a dialog allowing to choose a QQ or CRB report. In the Report Builder Wizard (if chosen) you will choose the type of report (Table, Chart or Matrix) before continuing with the Select Fields screen.
❷	**Help:**	Access on-line help.

Table View Panel

The Table View Panel displays the tables that have been selected for the query. The tables may be moved for easier viewing by clicking on and dragging the table to the desired location within the Table panel. Lines with linking field name labels depict the joining of Tables. As the tables are moved within the window, the join lines will move with them.

The following icons are used to denote links and selected fields in the query.

🔗	Linking Field	Appears to the right of a field that links to another table.
▦	Column Selected	Indicates fields that have been selected for use in the query.

The Join Panel and Filter Panel, along with the Table View Panel, are replaced with the SQL View when the Show SQL link is selected from the upper right section of the Table View Panel. In the Show SQL window, the actual SQL code is displayed in a text box and can be manually edited by selecting Edit SQL. If you wish to save any changes typed into the SQL textbox, click the Apply button.
To return to the Table View window with the Join and Filter panel, select **Show Table(s)** from the upper right section of the SQL View.

Joins Panel

If there are joined tables in the query, the **Joins Panel** displays information about each of those joins, including the type of join, which field has been selected for the left and right tables, and the operator. You may add joins by clicking the **Add Join** link in the top right of the **Joins Panel**.

The Actions Column displays two icons for editing or deleting a join.

📝	**Edit Join**	Displays Table Join window for configuration of selected join.
❌	**Delete Join**	Removes join from query.

11.   Remove the join between **DimLocation** and **FactPoliceActivity** tables.

12.   Click the **Table** button at the top of the designer, add the **FactTransaction** table, do not check **Auto Join Tables**.

13. Click the **Column** button and add the **TransactionAmount** column.

Adding Joins

Joins make relational database systems 'relational,' or able to relate between tables where data is stored, by allowing you to link data together from two or more tables into a single query result.

14. Select the **Add Join** link at the top right of the Join panel to open the **Table Join** window.

15. Select **FactTransaction** from the **Left Table** drop-down box, and select **DimTransactionKey** from the **Left Column** drop-down box.

16. Select **DimTransaction** from the **Right Table** drop-down box and **TransactionKey** from the **Right Column** drop down box.

Left Joins are created by checking the **first Include all rows checkbox.**
Right Joins are created by checking the **second Include all rows... checkbox**.
Inner Joins are created in the SQL statement if **neither** of the **Include all rows... checkboxes** is selected.
Full Joins are created if **both checkboxes** are selected.

Do not select either of these boxes for this exercise.

17. Click **Add** to apply the join.

The table below provides a description of each Table Join Properties available in Query Builder.

Table Join Properties:

Property:	Definition:
Left Table	The first table listed in the Join of the SQL statement.
Right Table	The second table listed in the Join of the SQL statement.
Column	The linking field within the tables.
Join Type	Filtering operators that allow you to limit the data returned from the database to your result set.
	= Returns only data that exactly matches your filter criteria.
	<> Returns data that is not equal to your filter criteria.
	> The 'Greater Than' operator returns only data that is greater than your filter criteria.
	>= The 'Greater Than or Equal To' operator results a return of only data that is greater than, or exactly equal to your filter criteria.
	< The 'Less Than' operator will result in a return of only data that is less than your filter criteria.
	<= The 'Less Than or Equal To' operator will result in a return of only data that is less than, or exactly equal to your filter criteria.
Include all rows from (left table) and matches from (right table)	Creates a Left Join in the SQL statement.
Include all rows from (right table) and matches from (left table)	Creates a Right Join in the SQL statement.

Filters

Filters allow you to eliminate unwanted data returned from the database to the result set. To add a filter, click the Add Filter link at the top right of the Filter Panel. In the Filter window, choose the Operator to apply to the desired field. Enter a value that is contained in the field. Click Update to enter the selected values in the Value textbox of the Filter window. Click Add when your filter is complete.

Use the **Lookup** link for a list of available values. You can select single or multiple values from the **Value Lookup** window. A **Calendar** widget assists in choosing values in **Date Format**.

Filters Panel

If a field has a **Filter** applied to it, information about the Filter will display in the **Filters Panel**. Remember, you can edit or delete a Filter by clicking on the appropriate **Edit** or **Delete** **icon** in the **Actions Column**.

18. Click the **Add Filter** link on the **Filter Panel**.

Filter Panel Columns:

Condition	When there is more than one filter in a query, you must designate if the filters should be applied along with the other filters (AND), or used in place of the other filters (OR).
Function	If there is a calculation configured in the query, it is displayed in the Function column.
Field	The name of the field that the filter is applied to.
Operator	The operator used in the filter, if any.
Value	If the filter contains an operator, the filter criteria displays in the Value column.

19. Change the field to **StopReasonCategory(DimPoliceTrafficStop)**

20. Click the **Lookup** link to display the **Value Lookup** window.

21. Select **General Violation** from the **Available Values** window.

22. Click **Update**.

23. Click **Add**.

You should see the following line in the Filter Panel:

Filters				Add Filter
Condition	Field	Operator	Value	Actions
	StopReasonCategory	=	General Violation	📝 ✖

Action Icons:

📝	**Edit Filter**	Modify expressions or parameters configured in your query.
✖	**Delete Filter**	Removes filter from query.

Filter Properties:

Properties:	Definitions:
Condition	When more than one filter is applied, choose whether the filter should work with other filters (AND), or act independently of other filters (OR).
Field	Select the field containing the data to be filtered.
Operator	Allows you to limit the data returned from the database to your result set.
Value	The filter criteria for your report. Enter criteria by typing in a value or values, or by choosing a value or values from the list in the 'Lookup' link.
Lookup	Displays the 'Value Lookup' window that allows you to choose from available filter values.

Operators:

Operator:	Definition:
=	Returns only data that exactly matches your filter criteria.
< >	Returns data that is not equal to your filter criteria.
<	The 'Less Than' operator will result in a return of only data that is less than your filter criteria.
< =	The 'Less Than or Equal To' operator will result in a return of only data that is less than, or exactly equal to your filter criteria.
>	The 'Greater Than' operator returns only data that is greater than your filter criteria.
> =	The 'Greater Than or Equal To' operator results a return of only data that is greater than, or exactly equal to your filter criteria.
between	Returns data that falls between the two limits specified within the filter criteria.
in	Returns data that falls within the set of filter criteria selected.
not in	Returns data that does not fall within the set of filter criteria selected.
is null	Returns data where the field value is null.
is not null	Returns data where the field value is not null.
like	Returns data that is like the filter criteria.
not like	Returns data that is not like the filter criteria.

Data View Panel

The results of your query are displayed in the Data View Panel. The Refresh Data link in the upper right corner of the Data View Panel allows you to re-run the query against the database for the most recent set of data.

Create a Report

Your query may be configured into a table, chart or matrix directly from Query Builder. Select the "Report" icon from the main toolbar. If the query is new and has not yet been saved, the "Save to Query Library" window opens. After saving the query to the desired folder in the Query Library, you will be prompted to select either a Quick Query report or a Report Builder report, before continuing on with the Report Builder wizard or opening up the Quick Query interface.

Exercise 3: Creating a Query with the Query Builder Wizard

1. Select **Query Builder** from the portal page

2. Select **New** from the top left of the designer.

3. Select the **LawEnforcementDW** datasource, click next.

4. Select the **DimDate**, **FactPoliceActivity** and **DimPerson** tables, click next.

5. Select **Fullname**(DimPerson), **FullDate**(DimDate),
   DayNameOfWeek(DimDate),**WeekdayWeekend**(DimDate),
   MonthName(DimDate), and **CalendarYear**(DimDate), click **Next**.

6. Sort by **Fullname**(DimPerson)

7. Add a filter that limits the records to those with fulldates in 2006.

8. Save the query to your personal folder.

Exercise 4: Editing a Query in Query Builder

1. Use the query created in exercise 3.

2. Select the table icon from the toolbar.

3. Add the **DimLocation** table.

4. Uncheck **Auto-Join Tables.**

5. Click the column icon in the toolbar.

6. Add the **DistrictName** column from the **DimLocation** table.

7. Add an INNER JOIN that connects DimLocation to DimPerson where
   DimLocation.LocationKey = **DimPerson.AddressHomeLocationKey**.

8. Save your query as "Exercise 4."

Exercise 5: Creating Another Query in Query Builder

1. Select **Query Builder** from the portal page.

2. Select **New** from the top left of the designer.

3. Select the **LawEnforcementDW** datasource, click next.

4. Select the **DimLocation**, **DimPerson**, **DimVehicle**, **DimVehicleMakeModel** and **FactPoliceActivity** tables.

5. Select the following columns:
    a. **FullName**(DimPerson)
    b. **AddressNumber**(DimLocation)
    c. **StreetName**(DimLocation)
    d. **StreetSuffix**(DimLocation)
    e. **City**(DimLocation)
    f. **State**(DimLocation)
    g. **PostalCode**(DimLocation)
    h. **LicenseState**(dimVehicle)
    i. **LicensePlate**(dimVehicle)
    j. **Make**(DimVehicleMakeModel)
    k. **Model**(DimVehicleMakeModel)
    l. **BodyStyle**(DimVehicleMakeModel)

6. Order the query by **Fullname**.

7. Remove the join between **factpoliceactivity** and **dimlocation**.

8. Filter the query to results from the first district.

Final Exercise

The Human Resources Manager has been using a single table in Quick Query to review employee information. However, the Manager needs to create a more robust report that includes the organization table. The HR Manager has rights to all tables and views, Quick Query, Query Builder and their personal folder in the Query and Report Libraries. How can you fulfill the request of the HR Manager to be able to continue manipulating the data as needed in Quick Query?

For this exercise you will need to Join together the employee, EmpJob and Organization tables in Cizer Query Builder. These tables should join automatically. Select any fields that you feel would make a sensible query from which a manager may draw from for multiple purposes. Upgrade the query to a QQ report and create a sensible report.

APPENDIX: Exercise Results

Exercise 1: Creating a Quick Query Salary Base Rate Report
[Ad Hoc Reporting With Cizer Quick Query, p. 2-30]

Forensic Vehicle Report

Total Count: 26000

Vehicle Owner	License State	License Plate	Street	City	State	Zip
Make: ACURA						
Model: 1.7 EL						
Iyer, Simon J.	CA	AFM 9365	386 Bishop Street	Pomerand Valley	California	65789-2611
Goktepe, Spencer J.	CA	BLH 0263	382 Chimney Rock Road	Pomerand Valley	California	65789-2611
Wojcik, Ryan B.	NV	KYU 5977	850 Mountain View Lane	Pomerand Valley	California	65789-2667
Fernandez, Masato B.	CA	DEY 0324	310 Treetop Avenue	Pomerand Valley	California	65789-2611
Haugh, Gary T.	CA	BLH 0263	107 Fenton Way	Pomerand Valley	California	65789-2625

Exercise 2: Creating a Quick Query Order Details Report

[Ad Hoc Reporting With Cizer Quick Query, p. 2-31]

Salary Report by Division and Department

Last	First	MI	Title	Work Phone
Division: Administrative				
Department: Clerical and Administrative Services				
Adams	Larry	P	Assistant II	530-685-1922
Addison	Cary	M	Assistant II	530-685-1731
Boyett	Cynthia	E	Assistant III	530-685-1434
Kabiri	Maria	L	Assistant IV	530-685-1757
Sandersen	Gary	K	Assistant III	530-685-1957
Department: Fiscal Services				
Barrett	Oliver	L	Sr Payroll Clerk	530-685-1738
Carter	Barbara	P	Sr Payroll Clerk	530-685-1813
Church	Gayle	A	Administrative Payroll Manager	530-685-1912
Clendenny	Linda	B	Administrative Payroll Manager	530-685-1676
Dailey	Wendy	L	Administrative Payroll Manager	530-685-1671
Griffling	Ronald	P	Sr Payroll Clerk	530-685-1721
Jackson	Robert	A	Sr Payroll Clerk	530-685-1812
Lopez	Salvatore	M	Sr Payroll Clerk	530-685-1906

Exercise 2b: Creating a Quick Query Order Details Report

[Ad Hoc Reporting With Cizer Quick Query, p. 2-31]

Salary Report by Division and Department
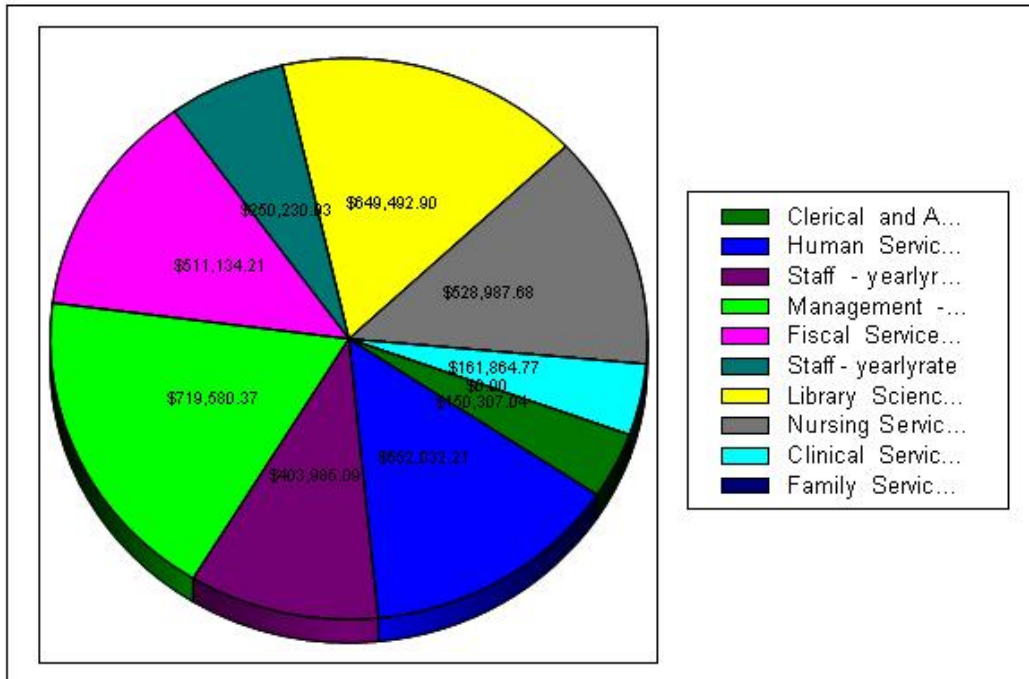
Department: ⇕	Salary ⇕
Clerical and Administrative Services	$150,307.04
Clinical Services	$161,864.77
Family Services	$0.00
Fiscal Services	$511,134.21
Human Services	$552,032.21
Library Sciences	$649,492.90
Management	$719,580.37
Nursing Services	$528,987.68
Staff	$250,230.03
Staff	$403,985.09
	$3,927,614.29

Page: 1

Exercise 3: Creating a Query with the Query Builder Wizard

[Cizer Query Builder For More Complex Ad Hoc Reports, p. 3-18]

Exercise 4: Editing a Query in Query Builder

[Cizer Query Builder for More Complex Ad Hoc Reports, p. 3-18]

Table View   Show SQL

DateKey = ActivityDateKey   PersonKey = SubjectPersonKey   LocationKey = AddressHomeLocationKey

DimDate
- AMTemperature
- AuditKey
- CalendarQuarter
- CalendarYear
- CalendarYearMonth
- CalendarYearQtr
- DateKey
- DateName

FactPoliceActivity
- ActivityDateKey
- InsertAuditKey
- LocationKey
- OffenseKey
- PoliceActivityKey
- PoliceActivityNK
- PoliceTrafficStopKey
- PrimaryOfficerPersonKey

DimPerson
- AddressHomeLocationKey
- AuditKey
- BirthDate
- EyeColor
- EyeColorCode
- FacialHair
- FirstName
- FullName

DimLocation
- AddressNumber
- AuditKey
- Block
- BlockId
- City
- DistrictAbbr
- DistrictName
- DistrictNumber

Joins   Add Join   Filters   Add Filter

Type	Left	Operator	Right	Actions		Condition	Field	Operator	Value	Actions
INNER JOIN	DimDate	=	FactPoliceActivity				FullDate	BETWEEN	2006-01-01, 2006-12-31	
INNER JOIN	DimPerson	=	FactPoliceActivity							
INNER JOIN	DimLocation	=	DimPerson							
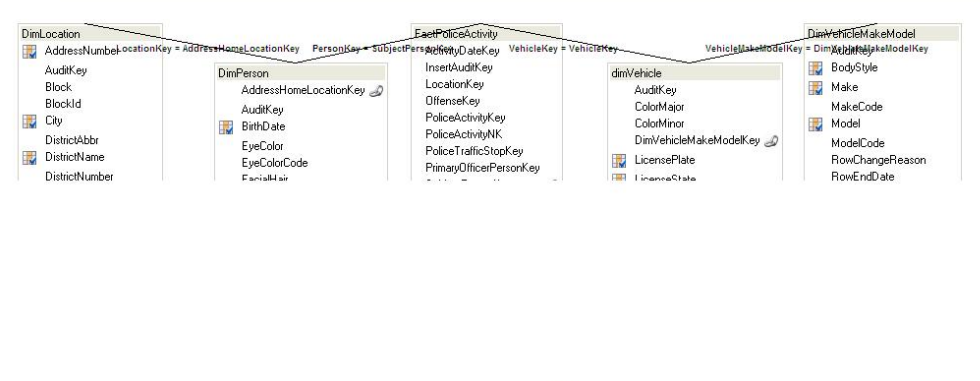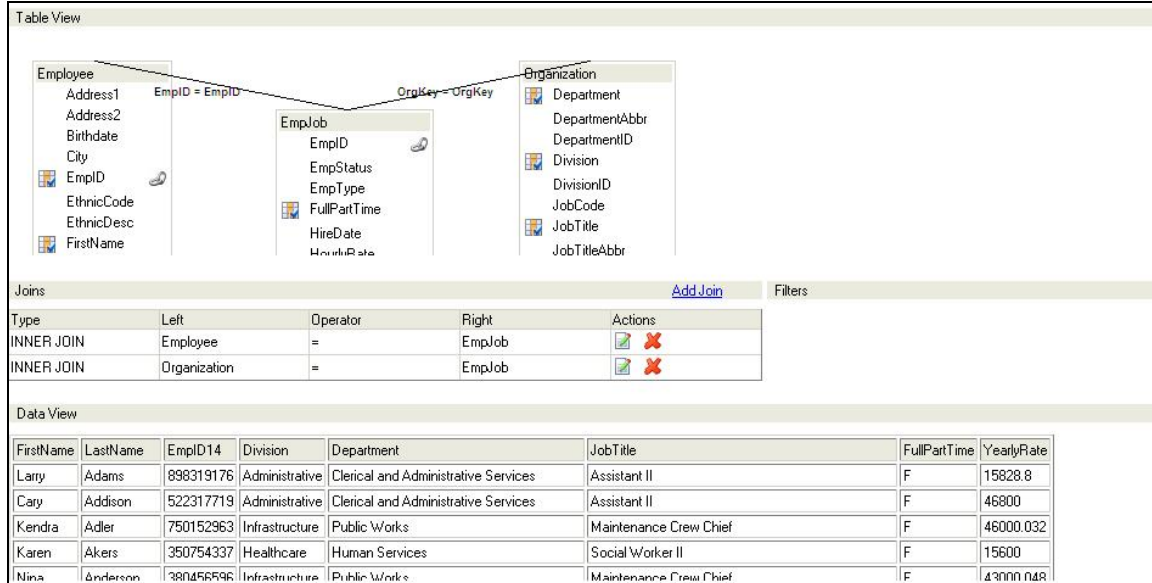
Data View   Refresh data

FullName	DistrictName	FullDate	DayNameOfWeek	WeekdayWeekend	MonthName	CalendarYear
Abbas, Bernard S.	Third	1/7/2006 12:00:00 AM	Saturday	Weekend	January	2006
Abbas, Taylor M.	Third	11/7/2006 12:00:00 AM	Tuesday	Weekday	November	2006
Abbas, Taylor M.	Third	5/16/2006 12:00:00 AM	Tuesday	Weekday	May	2006
Abel, Barry J.	Third	10/3/2006 12:00:00 AM	Tuesday	Weekday	October	2006

Exercise 5: Creating Another Query in Query Builder
[Cizer Query Builder for More Complex Ad Hoc Reports, p. 3-19]

Final Exercise:

[Cizer Query Builder for More Complex Ad Hoc Reports, p. 3-20]

Employee Salary Report by Division and Department

First	Last	EmpID	Job Title	Full or Part Time	Salary
Administrative					
Clerical and Administrative Services					
Larry	Adams	898319176	Assistant II	F	$15,828.80
Cary	Addison	522317719	Assistant II	F	$46,800.00
Linda	Bickett	994253857	Assistant III	F	$31,200.00
Janice	Blankenburg	726616505	Assistant III	P	$12,480.00
Cynthia	Boyett	164920847	Assistant III	P	$34,375.12
Patricia	Branscome	898965943	Assistant III	P	$7,498.40
Darrin	Butterfield	955861448	Assistant III	P	$16,999.84
Amy	Fraser	917206784	Assistant II	F	$11,752.00
Maria	Kabiri	557682457	Assistant IV	F	$20,196.80
Shannon	Mulligan	729286034	Assistant II	F	$35,360.00
Gary	Sandersen	957647826	Assistant III	P	$33,106.32